REPORT

Fourth Quarter/Annual Monitoring Report

SCA Services, Inc.
c/o Waste Management, Inc.
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

February 2003

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BLASLAND, BOUCK & LEE, INC.
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1. Introduction

This *Fourth Quarter/Annual Monitoring Report* (report) has been prepared by Blasland, Bouck & Lee, Inc. (BBL), on behalf of SCA Services, Inc. (SCA), to describe the results of 2002 fourth quarter and annual monitoring activities performed at the Kin-Buc Landfill Site (the site) in Edison Township, Middlesex County, New Jersey (Figure 1).

Water-quality, hydraulic, and landfill gas monitoring activities have been conducted at the site since 1995 to evaluate the effectiveness of past remedial actions performed at the site. This report presents the results of the annual groundwater and surface-water sampling, conducted by BBL in November 2002, as well as the hydraulic and landfill gas monitoring for the fourth quarter (October through December) of 2002 conducted by EMCON/OWT, Inc. (EMCON/OWT). EMCON/OWT conducted all hydraulic monitoring and landfill gas monitoring activities during 2002. Results obtained between January and September 2002 have been provided to the United States Environmental Protection Agency (USEPA) in the *First Quarter Monitoring Report, January to March 2002* (EMCON/OWT, May 2002); the *Second Quarter Monitoring Report, April to June 2002* (EMCON/OWT, September 2002); and the *Third Quarter Monitoring Report, July to September 2002* (EMCON/OWT, October 2002). The results of the fourth quarter monitoring activities are summarized in this report and presented in the *Fourth Quarter Monitoring Report, October to December 2002* (EMCON/OWT, February 2003), which has been submitted to the USEPA under separate cover.

1.1 Site Description and History

The site is an inactive, closed municipal solid waste and industrial waste landfill located at 383 Meadow Road in Edison Township, Middlesex County, New Jersey (Figure 1). The site occupies approximately 220 acres, and is bounded to the north by an industrial park, to the west by the Raritan River, and to the east by Edmonds Creek, which drains a tidal wetland area before discharging to the Raritan River. The Edison Township Municipal Landfill lies approximately 600 feet to the south. In addition to the adjacent Edison Township Landfill, the northernmost boundary of Edgeboro Landfill is located approximately 0.5 mile southwest of the site on the opposite side of the Raritan River. The closed IRL landfill is on the same side of the river, approximately 1 mile to the east (Figure 2).

Landfill activities began at the site in approximately 1947; Kin-Buc, Inc. began operating the site in 1968. Landfill activities ceased in 1976, and, in 1981, the site was added to the National Priorities List (NPL) under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), commonly known as Superfund.

Between 1983 and 1988, Kin-Buc, Inc. and SCA (the respondents) conducted a Remedial Investigation/ Feasibility Study (RI/FS). The findings of the RI/FS resulted in a Record of Decision (ROD) from the USEPA on September 30, 1988 separating the site into two remedial areas known as Operable Unit 1 (OU1) and Operable Unit 2 (OU2). OU1 consists of the Kin-Buc Landfill I mound (Kin-Buc I), the Kin-Buc Landfill II mound (Kin-Buc II), the Pool C Area, and portions of the low-lying area between Kin-Buc I and the Edison Township Landfill. OU2 consists of the Edmonds Creek Marsh Area (ECMA), Mill Brook, Martin's Creek, Kin-Buc Landfill Mound B, and portions of the low-lying area between Kin-Buc I and the Edison Township Landfill. These areas are illustrated on Figure 2.

On September 21, 1990, the USEPA amended earlier unilateral orders and required the respondents to implement the OU1 ROD. The OU1 source control remedy specified in the ROD required the following remedial actions: construction of a slurry wall around OU1, collection and treatment of leachate and

groundwater from within the containment area, and capping of the area within the slurry wall. During the implementation of OU1 remedial activities, oil seeps were observed outside the limit of the perimeter slurry wall adjacent to the Pool C Area. Based on the presence of these oil seeps, the respondents conducted an investigation and identified the presence of oil-soaked refuse. An isolation berm was constructed around the Oil Seeps Area (BBL, 1996). The limits of the berm are illustrated on Figure 3.

The OU1 ROD also required the respondents to conduct a second RI/FS to determine the nature and extent of contamination outside the source area (i.e., within OU2). The respondents submitted the results of the OU2 RI to the USEPA in 1991, and the results of the FS in 1992. The USEPA issued the OU2 ROD on September 28, 1992. The OU2 ROD specified a natural attenuation remedy for OU2, and required the excavation and disposal of polychlorinated biphenyl- (PCB-) contaminated sediment from the ECMA, the restoration of disturbed wetland areas, and groundwater and surface-water monitoring. Remedial activities for OU1 and OU2 were completed by August 1995.

1.2 Site Geology and Hydrogeology

There are four stratigraphic units present within OU1. The refuse/fill stratum is present just below the ground surface. Organic-rich clay and silt, or "meadow mat" underlies the refuse/fill stratum in the southern two-thirds of Kin-Buc I. A sand and gravel layer is below the meadow mat in the southern two-thirds of Kin-Buc I. The bedrock, consisting of the Brunswick Formation and the Lockatong Formation, is present below the refuse/fill stratum in Kin-Buc II and the northern one-third of Kin-Buc I, and below the sand and gravel layer in the southern two-thirds of Kin-Buc I (USEPA, 1988).

In OU2, a 1- to 9-foot-thick soil layer overlies a refuse/fill layer of varying thickness, consisting of municipal solid waste and industrial waste. Meadow mat (approximately 7 feet thick) underlies the refuse/fill layer, and a sand and gravel unit is present below the meadow mat. The bedrock, consisting of the Brunswick Formation and the Lockatong Formation, is present below the sand and gravel unit between 25 and 46 feet below ground surface (bgs) (USEPA, 1992).

All four stratigraphic units are water-bearing; however, only the bedrock unit is regionally extensive and used for water supply. Portions of the sand and gravel unit are in direct hydraulic contact with the Raritan River and are affected by tidal influences.

1.3 Purpose and Background of Monitoring Program

In accordance with the OU1 and OU2 RODs, water-quality, hydraulic, and landfill gas monitoring are required to evaluate the effectiveness of past remedial actions performed at the site. This is accomplished by examining changes in water quality attributable to the selected remedies (source control in OU1 and natural attenuation in OU2).

The general remedial objectives of the OU1 containment and collection systems are to contain source leachate and contaminated groundwater, and to prevent further migration of site related contaminants. EMCON/OWT summarized the specific remedial objectives for the leachate and groundwater collection as follows:

Aqueous Leachate Collection

Primary Objective

- Collect leachate from the refuse unit within the perimeter slurry wall to impose an inward gradient as measured across the slurry wall (hydraulic containment).

Additional Benefit

- Reduce the downward gradient between the refuse unit and the underlying sand and gravel or bedrock units.

Sand and Gravel Groundwater Collection (in Primary OU1 Containment)

Primary Objective

- Prevent migration of contaminated groundwater toward the slurry wall.
- Impose an upward gradient from the bedrock unit to the sand and gravel unit (hydraulic containment).

Additional Benefit

- Impose an inward gradient within the sand and gravel unit as measured across the perimeter slurry wall (hydraulic containment).

Sand and Gravel Aquifer Groundwater Collection (in Oil Seeps Area Containment)

Primary Objective

- Collect sand and gravel groundwater from within the Oil Seeps Area if an upward gradient between the sand and gravel and the refuse units cannot be imposed by leachate collection alone (EMCON/OWT, May 2002).

Four leachate pump stations and five sand and gravel groundwater pumping wells (Figure 3) comprise the hydraulic control system for OU1. The leachate collection system consists of a perforated pipe that runs parallel to the interior of the circumferential slurry wall, and a corrugated oily leachate collection conduit located along the south side of Kin Buc I. The OU1 hydraulic monitoring network is composed of 29 monitoring wells located along the slurry wall, including 11 wells screened in the refuse/fill, eight wells screened in the sand and gravel, and 10 wells screened in bedrock (EMCON/OWT, May 2002).

Most of the 29 monitoring wells in OU1 are located in five clusters, or transects. The locations of the OU1 monitoring wells and transects are shown on Figure 3. The monitoring wells at each transect were installed in pairs, within the same hydrogeologic unit, with one well inside and one well outside the slurry wall. Groundwater elevations are measured on both sides of the slurry wall to evaluate the performance of the slurry wall as a hydraulic barrier.

At Transects 2, 3, and 4, monitoring wells were installed in the refuse/fill, sand and gravel, and bedrock units. At Transects 1 and 5, monitoring wells were installed only in the refuse and bedrock units due to the absence of

sand and gravel deposits in these areas. Well designations of G, S, and R denote hydraulic units of refuse/fill, sand and gravel, and bedrock, respectively (EMCON/OWT, May 2002).

The OU2 hydraulic monitoring network is located in the Low Lying Area and Mound B, and monitors groundwater elevations outside the OU1 containment area. Sixteen monitoring wells comprise the monitoring network, including one background bedrock monitoring well (WE-114DR). The location of monitoring well WE-114DR is presented on Figure 3. The locations of the other 15 OU2 monitoring wells are shown on Figure 4.

Initial monitoring activities began in 1995 and consisted of monthly hydraulic monitoring and quarterly landfill gas monitoring. These activities were conducted in accordance with the *Draft Operations and Maintenance (O&M) Manual for the Kin-Buc Landfill* (Wheelabrator EOS, 1995), as modified by a February 28, 1996 letter to the USEPA. Additionally, groundwater and surface-water monitoring were conducted on a quarterly basis for a limited list of parameters and annually for an expanded list of parameters.

In August 1996, the groundwater and surface-water monitoring program was evaluated by EMCON/OWT, on behalf of SCA. EMCON/OWT determined that the monitoring program did not adequately monitor changes in water quality attributable to the selected remedies. A modified monitoring program was proposed, and, on behalf of SCA, EMCON/OWT submitted a *Final Field Sampling Plan* (FSP) (EMCON/OWT, 1997) to the USEPA in November 1997. Sampling parameters were modified, and sampling frequency was reduced to one annual event. This plan was approved by the USEPA and has been used since 1997 for groundwater and surface-water monitoring activities.

1.4 Scope of Monitoring Program

The scope of the monitoring program has been presented in the *Draft Operations and Maintenance (O&M) Manual for the Kin-Buc Landfill* (Wheelabrator EOS, 1995), as modified by a February 28, 1996 letter to the USEPA, and the FSP. The components of the monitoring program are briefly described in the following sections.

1.4.1 Hydraulic Monitoring

The objective of the hydraulic monitoring program is to assess the hydraulic performance of the slurry wall. Manual water-level measurements are obtained from 29 monitoring wells in OU1 and 16 monitoring wells in OU2, and continuous water-level measurements are obtained from 24 groundwater monitoring wells in OU1. The results of the OU1 measurements are evaluated to assess whether lower hydraulic heads inside the slurry wall (relative to outside the slurry wall) are maintained, representing intragradient flow conditions. This condition minimizes the potential for contaminant migration beyond the limits of the slurry wall.

The hydraulic monitoring program also evaluates the leachate withdrawal and groundwater pumping rates, and the ability of the pumping rates to achieve/maintain an upward vertical gradient between the bedrock and the overlying sand and gravel deposits. The maintenance of upward vertical gradients minimizes the potential for vertical migration of contaminants into the bedrock groundwater aquifer.

Hydraulic monitoring program procedures are summarized in Section 2.1. Results of the hydraulic monitoring conducted in 2002 are presented in Section 3.1.

1.4.2 Landfill Gas Monitoring

The objective of the landfill gas monitoring program for OU1 is to monitor offsite gas migration in areas where gas migration or accumulation could cause an explosive condition. Combustible gas and lower explosive limit measurements are obtained from six gas migration monitoring wells. The six wells are located outside the slurry wall along the northern edge of the landfill boundary. The locations of the gas migration monitoring wells are illustrated on Figure 3.

An active gas extraction system is in operation at the site. Combustible gas measurements are also obtained from the landfill's operational flare port inlet.

Landfill gas monitoring program procedures are summarized in Section 2.2. Results of the landfill gas monitoring conducted in 2002 are presented in Section 3.2.

1.4.3 Groundwater Monitoring

The objective of the groundwater monitoring program for OU1 and OU2 is to monitor groundwater quality. Groundwater samples are obtained from 21 monitoring wells along five transects in OU1. The groundwater monitoring well network consists of six wells screened in the refuse/fill unit, five wells screened in the sand and gravel unit, and 10 wells screened in the bedrock. The OU1 monitoring wells and transects are summarized in Table 1. OU1 monitoring well and transect locations are illustrated on Figure 3. In general, the OU1 monitoring program monitors groundwater quality in the refuse/fill and sand and gravel wells outside the slurry wall and in all bedrock wells inside and outside the slurry wall.

Groundwater samples are obtained from 16 monitoring wells in OU2. The groundwater monitoring well network consists of five wells screened in the refuse/fill unit, five wells in the sand and gravel unit, and six wells in the bedrock. The OU2 monitoring wells are summarized in Table 2. OU2 monitoring well locations are illustrated on Figures 3 and 4. The OU2 monitoring program monitors groundwater quality in the Low-Lying Area and Mound B following groundwater containment in OU1.

Groundwater monitoring program procedures are summarized in Section 2.3. As discussed in Section 2.3, in November 2002, groundwater samples were collected from 34 of the 37 monitoring wells. Samples were not collected from two monitoring wells in OU1 and one monitoring well in OU2 since these wells did not have sufficient volumes of water to purge or sample. Results of the groundwater monitoring conducted in November 2002 are presented in Section 3.3.

1.4.4 Surface-Water Monitoring

The objective of the surface-water monitoring program is to monitor surface-water quality in the Raritan River downstream of, adjacent to, and upstream from the site. Surface-water samples are obtained from four locations in the Raritan River. The surface-water sample locations are presented in Table 2 and are illustrated on Figure 5.

Surface-water monitoring program procedures are summarized in Section 2.4. Results of the surface-water monitoring conducted in November 2002 are presented in Section 3.4.

2. Monitoring Program Procedures

EMCON/OWT conducted the hydraulic and landfill gas monitoring activities in 2002. Procedures used between January and September 2002 have been provided to the USEPA in the *First Quarter Monitoring Report, January to March 2002* (EMCON/OWT, May 2002); the *Second Quarter Monitoring Report, April to June 2002* (EMCON/OWT, September 2002); and the *Third Quarter Monitoring Report, July to September 2002* (EMCON/OWT, October 2002). The monitoring program procedures used during the fourth quarter are summarized in Sections 2.1 and 2.2 and presented in the *Fourth Quarter Monitoring Report, October to December 2002* (EMCON/OWT, February 2003), which has been submitted to the USEPA under separate cover.

BBL and Severn Trent Laboratories, Inc. in Edison, New Jersey (STL-NJ), under subcontract to BBL, performed the annual groundwater and surface-water sampling in November 2002. Analytical work for chemical constituents was performed by Severn Trent Laboratories, Inc. in Amherst, New York (STL), under contract to SCA. STL subcontracted methane, ethane, and ethene analyses to Severn Trent Laboratories, Inc. in Burlington, Vermont (STL-VT).

During a 2002 certification review, STL determined that it had performed metal and cyanide analyses (via EPA Methods 200.7 and 335.3, respectively) for the site in 2000 and 2001 without complete certification to perform these analyses from the New Jersey Department of Environmental Protection (NJDEP). Once STL notified SCA about its status, SCA directed STL to cease analysis of site samples requiring these methods. STL is currently working toward obtaining certification for these analyses, and is in "Applied Status."

The 2000 and 2001 analytical results are not believed to be affected by the absence of NJDEP certification, since proper protocols were followed and quality control was performed in accordance with the referenced methods. For the 2002 sampling event, STL subcontracted metal and cyanide analyses to Severn Trent Laboratories, Inc. in Shelton, Connecticut (STL-CT).

Field work was conducted in accordance with the *Draft Operations and Maintenance (O&M) Manual for the Kin-Buc Landfill* (Wheelabrator EOS, 1995), as modified by a February 28, 1996 letter to the USEPA, and the FSP. Field work activities that were outside the specifications outlined within these two documents (based on field conditions) are noted in the following sections.

2.1 Hydraulic Monitoring

2.1.1 General Procedures

On a monthly basis, manual groundwater-level measurements were obtained from 29 monitoring wells in OU1 and 16 monitoring wells in OU2. Groundwater monitoring wells included in the hydraulic monitoring are presented in the *Fourth Quarter Monitoring Report, October to December 2002* (EMCON/OWT, February 2003). An electronic water-level indicator was used to manually measure groundwater levels from established reference points. Reference points were previously surveyed by a New Jersey-licensed surveyor, and consisted of the top of each outer casing. Manual groundwater levels were measured to the nearest hundredth of a foot and recorded.

Continuous groundwater-level measurements were obtained from 24 monitoring wells in OU1. Single-well Trolls® (22 Model SP4000 and 2 Model /SSP-100 combined data loggers and pressure transducers manufactured by In-Situ, Inc.) were installed in each monitoring well included in the hydraulic monitoring. The

Trolls® remained in the wells and recorded continuous groundwater-level measurements at 1-hour intervals. Once a month, the electronic data were downloaded from the Trolls® to a personal laptop computer. The data were then plotted graphically.

Each month, the continuous groundwater-level measurements collected by the Trolls® were compared with the manual groundwater-level measurements to provide information on the relative accuracy of manual versus automatic recordings.

Hydraulic monitoring results obtained in the fourth quarter (October to December 2002) are summarized in Section 3.1.4 and presented in the *Fourth Quarter Monitoring Report, October to December 2002* (EMCON/OWT, February 2003).

2.1.2 Leachate Withdrawal/Groundwater Pumping

Operation records were maintained at the site and contained estimated daily averages for leachate and groundwater withdrawal. Monthly volumes collected and daily average collection rates for the fourth quarter (October to December 2002) are summarized in Section 3.1.4 and presented in the *Fourth Quarter Monitoring Report, October to December 2002* (EMCON/OWT, February 2003).

2.2 Landfill Gas Migration Monitoring

2.2.1 Gas Migration Monitoring Wells

On December 6, 2002, combustible gas and lower explosive limit measurements were obtained from six gas migration monitoring wells. The six wells are located outside the slurry wall along the northern edge of the landfill boundary. The locations of the gas migration monitoring wells are illustrated on Figure 3. Gas measurements were collected using a Landtec GEM 500 Gas Analyzer equipped with a charcoal filter. At each monitoring well, the sampling tube on the meter was attached to the well head petcock, a sample was drawn through the meter, and the result was recorded.

Combustible gas and lower explosive limit measurements obtained on December 6, 2002 are summarized in Section 3.2.1. and presented in the *Fourth Quarter Monitoring Report, October to December 2002* (EMCON/OWT, February 2003).

2.2.2 Operation Flare

Combustible gas measurements were obtained from the landfill's operational flare port inlet throughout the quarter. Gas measurements were collected using a Landtec GEM 500 Gas Analyzer equipped with a charcoal filter.

Combustible gas measurements obtained during the fourth quarter (October to December 2002) are summarized in Section 3.2.2 and presented in the *Fourth Quarter Monitoring Report, October to December 2002* (EMCON/OWT, February 2003).

2.3 Groundwater Sampling and Analysis

Groundwater samples were collected from 34 monitoring wells (19 wells in OU1 and 15 wells in OU2) between November 11 and 21, 2002 and on December 5, 2002. Monitoring well and groundwater sample locations for

OU1 and OU2 are summarized in Tables 3 and 4, respectively. OU1 monitoring well locations are illustrated on Figure 3, and OU2 monitoring well locations are illustrated on Figures 3 and 4.

Monitoring wells were screened with a photoionization detector (PID) and gauged with an oil/water interface probe prior to groundwater purging and sampling activities. Groundwater samples were collected using low-flow purging and sampling methods as described in the FSP. Low-flow sampling was conducted in general accordance with protocols presented in the *Ground Water Sampling Procedure, Low-Stress (Low Flow) Purging and Sampling, Final Ground Water Sampling SOP* (USEPA, March 1998) and the *Environmental Investigations Standard Operating Procedures and Quality Assurance Manual* (USEPA, May 1996).

A bladder pump equipped with a dedicated Teflon® bladder and Teflon® and stainless-steel fittings was used for purging and sampling. Dedicated Teflon®-lined polyethylene tubing was used to discharge groundwater from the bladder pump. The bladder pump was positioned in each well such that the pump intake was situated in the middle of the well screen, when possible. The initial purging rate was set between 200-500 milliliters per minute (mL/min). The water level within each well was monitored throughout the purge. When necessary, the purge rate was reduced so that the water level within a well was not lowered by more than 0.3 foot.

During purging, the following parameters were measured and recorded approximately every 3 minutes using water-quality meters in an in-line flow-through cell:

- pH;
- Temperature;
- Conductivity;
- Oxidation-Reduction Potential (ORP);
- Dissolved Oxygen; and
- Turbidity.

Sampling was conducted when these parameters stabilized within the following ranges for three consecutive readings.

Parameter	Stabilization Criterion
pH	+/- 0.1 standard unit
Conductivity	+/- 3 %
ORP	+/- 10 millivolts
Dissolved Oxygen	+/- 10 %
Turbidity	+/- 10 %

Monitoring well purge and sample logs, containing sampling information and field parameter measurements recorded during groundwater purging, are included in Appendix A.

In accordance with the FSP, monitoring wells W-2G, W-10G, and W-15G were purged using a peristaltic pump due to minimal volume of water in the well. Monitoring wells W-2G and W-15G were pumped dry prior to parameter stabilization and, therefore, were not sampled. Parameter stabilization was achieved at monitoring well W-10G on November 12, 2002. However, only sample volume for volatile organic compound (VOC)

analysis was collected before the well was pumped dry. Sample volume for semivolatile organic compound (SVOC), PCB, metal, general chemistry, and natural attenuation analyses was collected between November 13 and 18, 2002 with a peristaltic pump, as well recharge permitted. Sample volume for total organic halide (TOX), total dissolved solid (TDS), chloride, and nitrate nitrogen analyses was collected on December 5, 2002 with a peristaltic pump, following a second purge and parameter stabilization. Monitoring well W-4G also went dry following purging and sampling for VOCs. Recharge occurred after 1 hour, and the remaining sample volume was collected using a peristaltic pump. Well GEI-7G did not have a sufficient volume of water to purge or sample.

Obstructions in monitoring wells W-6S, W-6G, and GEI-6S prevented the use of bladder pumps. These wells were purged and sampled with a peristaltic pump. Wells W-6G and W-6R were initially purged and sampled on November 13, 2002. However, a sample shipment delay caused the samples (excluding those to be analyzed for VOCs) to arrive at the laboratory past their holding times and/or above the temperature requirement. These wells were re-purged and re-sampled on November 18, 2002 for all parameters except VOCs.

Samples were collected at a flow rate between 100 mL/min and 250 mL/min. Sample bottles were filled by letting the groundwater flow down the inner wall of the bottle to minimize turbulence. All samples were collected in laboratory-supplied glassware.

Quality Assurance/Quality Control (QA/QC) samples were collected in accordance with the site-specific Quality Assurance Project Plan (QAPP) in the FSP. One field blank was collected per day of sampling to assess whether contaminants were introduced by the sampling equipment. Blind duplicate samples and matrix spikes/matrix spike duplicates (MS/MSDs) were collected at a frequency of one for every 20 samples collected. Blind duplicate samples were collected to assess sampling precision, and MS/MSDs were collected to assess the effect, if any, of the matrix on the precision and accuracy of the analytical laboratory. One trip blank accompanied the VOC samples to and from the laboratory. The samples were maintained on ice under full chain-of-custody procedures, and were shipped for overnight delivery to STL for analysis of the parameters included in Table 5.

Groundwater-quality results are discussed in Section 3.3.

2.4 Surface-Water Sampling and Analysis

Four surface-water samples were collected from the Raritan River on November 21, 2002. Surface-water sampling was conducted downstream of, adjacent to, and upstream from the site. Sample SW-04 was collected downstream of the OU1 leachate treatment plant discharge. Samples SW-02 and SW-03 were collected adjacent to Mound B. Sample SW-01 was collected downstream of the confluence with Martin's Creek. Approximate surface-water sample locations are shown on Figure 5.

Surface-water samples were collected during an outgoing tide, from downstream sample locations to upstream sample locations. The grab water samples were collected with a dip sampler, following protocols established in the USEPA Environmental Response Team (ERT) *Standard Operating Procedure (SOP) #2013 – Surface Water Sampling* (USEPA ERT, 1994). QA/QC samples were collected in accordance with the site-specific QAPP in the FSP. One field blank was collected to assess whether contaminants were introduced by the sampling equipment. One trip blank accompanied the VOC samples to and from the laboratory. The samples were maintained on ice under full chain-of-custody procedures, and were shipped for overnight delivery to STL for analysis of the parameters included in Table 5.

After sample collection, field personnel collected water-quality measurements from each of the sample locations with a water-quality instrument. Measurements for pH, temperature, conductivity, dissolved oxygen, and turbidity were collected and recorded.

Surface-water-quality results are discussed in Section 3.4.

2.5 Natural Attenuation Monitoring

Natural attenuation monitoring was completed in conjunction with the low-flow purging and sampling (Section 2.3). Parameters including pH, conductivity, ORP, dissolved oxygen, turbidity, and temperature were measured using the water-quality meters in an in-line flow-through cell. Alkalinity, ferrous iron, sulfate, and sulfide were measured using Hach Company (Hach) field test kits in accordance with the FSP. Samples were collected for methane, ethane, ethene, and nitrate nitrogen analysis and were shipped to STL as described in Section 2.3.

3. Monitoring Program Results

The data obtained through the monitoring activities described in Section 2 are presented in Sections 3.1 through 3.5 of this report.

3.1 Hydraulic Monitoring and Leachate Withdrawal/Groundwater Pumping

EMCON/OWT conducted the hydraulic and landfill gas monitoring activities in 2002. Results obtained between January and September 2002 have been provided to the USEPA in the *First Quarter Monitoring Report, January to March 2002* (EMCON/OWT, May 2002); the *Second Quarter Monitoring Report, April to June 2002* (EMCON/OWT, September 2002); and the *Third Quarter Monitoring Report, July to September 2002* (EMCON/OWT, October 2002). Brief summaries of the results are presented in Sections 3.1.1 through 3.1.3. The results obtained during the fourth quarter (October to December 2002) are summarized in Section 3.1.4 and presented in the *Fourth Quarter Monitoring Report, October to December 2002* (EMCON/OWT, February 2003), which has been submitted to the USEPA under separate cover.

3.1.1 First Quarter - 2002

Hydraulic Monitoring

Hydraulic monitoring indicated that intragradient conditions in the refuse unit were maintained at Transects 3, 4, and 5. The average flow condition in the refuse unit at Transect 2 was intragradient. The leachate collection system functioned properly, suggesting that intragradient conditions were being maintained in the refuse unit at Transect 1, even though water levels in monitoring wells W-1G and W-2G did not indicate this condition (EMCON/OWT, May 2002).

Intragradient conditions in the sand and gravel unit were maintained at Transects 3 and 4. Intragradient conditions were not observed in the sand and gravel unit at Transect 2 (EMCON/OWT, May 2002).

Upward vertical gradient conditions between the bedrock and the overlying sand and gravel deposits were consistently observed only at Transect 4 inside the slurry wall. Slight upward gradient conditions between the bedrock and the overlying sand and gravel deposits were observed at Transect 2 outside the slurry wall with the exception of a 1-week period in March. A dominant flow direction was not established between the bedrock and the overlying sand and gravel deposits at Transects 3 and 4 outside the slurry wall. Upward gradient conditions were not consistently observed at Transect 2 inside the slurry wall. Inside the slurry wall at Transect 3, upward conditions were not observed (EMCON/OWT, May 2002).

As discussed in Section 3.1.4, hydraulic monitoring during the fourth quarter of 2002 included a re-evaluation of the hydraulic head data based on the considerable pumping influence of the sand and gravel pumping wells. It was demonstrated that hydraulic control was maintained in the sand and gravel unit, and groundwater in the bedrock was ultimately captured by the pumping wells, resulting in overall containment of groundwater in OU1. While this analysis was not specifically performed for the first quarter of 2002, a review of the pumping records indicated that, except for occasional periods, the combined pumping rates for two sand and gravel pumping wells (S&G Well #2 and S&G Well #3) (Figure 3) were relatively consistent throughout the year. EMCON/OWT concluded that hydraulic control was maintained in OU1 during the first quarter of 2002 (EMCON/OWT, February 2003).

Leachate Withdrawal/Groundwater Pumping

Groundwater was collected from the four sand and gravel groundwater pumping wells at an average rate of approximately 19,427 gallons per day (gpd). The total volume of groundwater collected was approximately 1,748,439 gallons. Leachate was collected at an average daily rate of approximately 1,707 gpd, and the total volume of leachate collected was approximately 153,626 gallons. Both groundwater and leachate collection were generally consistent with recommended withdrawal rates (EMCON/OWT, May 2002).

3.1.2 Second Quarter – 2002

Hydraulic Monitoring

Hydraulic monitoring indicated that intragradient conditions in the refuse unit were maintained at Transects 2, 3, 4, and 5. The leachate collection system functioned properly, suggesting that intragradient conditions were being maintained in the refuse unit at Transect 1, even though water levels in monitoring wells W-1G and W-2G did not indicate this condition (EMCON/OWT, September 2002).

Intragradient conditions in the sand and gravel unit were maintained at Transects 3 and 4. Intragradient conditions were not observed in the sand and gravel unit at Transect 2 (EMCON/OWT, September 2002).

Upward vertical gradient conditions between the bedrock and the overlying sand and gravel deposits were consistently observed at only Transect 4 inside the slurry wall. Slight upward gradient conditions between the bedrock and the overlying sand and gravel deposits were observed at Transect 2 inside the slurry wall and Transect 3 outside the slurry wall. A dominant flow direction was not established between the bedrock and the overlying sand and gravel deposits at Transect 4 outside the slurry wall. Inside the slurry wall at Transect 3, upward conditions were not observed (EMCON/OWT, September 2002).

As discussed in Section 3.1.4, hydraulic monitoring during the fourth quarter of 2002 included a re-evaluation of the hydraulic head data based on the considerable pumping influence of the sand and gravel pumping wells. It was demonstrated that hydraulic control was maintained in the sand and gravel unit, and groundwater in the bedrock was ultimately captured by the pumping wells, resulting in overall containment of groundwater in OU1. While this analysis was not specifically performed for the second quarter of 2002, a review of the pumping records indicated that, except for occasional periods, the combined pumping rates for two sand and gravel pumping wells (S&G Well #2 and S&G Well #3) were relatively consistent throughout the year. EMCON/OWT concluded that hydraulic control was maintained in OU1 during the second quarter of 2002 (EMCON/OWT, February 2003).

Leachate Withdrawal/Groundwater Pumping

Groundwater was collected from the four sand and gravel groundwater pumping wells at an average rate of approximately 16,925 gpd. The total volume of groundwater collected was approximately 1,660,431 gallons. Leachate was collected at an average daily rate of approximately 1,524 gpd, and the total volume of leachate collected was approximately 137,145 gallons. Both groundwater and leachate collection were generally consistent with recommended withdrawal rates (EMCON/OWT, September 2002).

3.1.3 Third Quarter – 2002

Hydraulic Monitoring

Hydraulic monitoring indicated that intragradient conditions in the refuse unit were maintained at Transects 2, 3, 4, and 5. The leachate collection system functioned properly, suggesting that intragradient conditions were being maintained in the refuse unit at Transect 1, even though water levels in monitoring wells W-1G and W-2G did not indicate this condition (EMCON/OWT, October 2002).

Intragradient conditions in the sand and gravel unit were maintained at Transects 3 and 4. Intragradient conditions were maintained in the sand and gravel unit at Transect 2 for the months of August and September (EMCON/OWT, October 2002).

Upward vertical gradient conditions between the bedrock and the overlying sand and gravel deposits were consistently observed at Transects 2 and 3 outside the slurry wall and at Transect 4 inside the slurry wall. Upward gradient conditions between the bedrock and overlying sand and gravel deposits were observed at Transect 3 both inside and outside the slurry wall for the months of July and August. Upward gradient conditions were not observed inside the slurry wall at Transect 2 or outside the slurry wall at Transect 4. A dominant flow direction was not established between the bedrock and the overlying sand and gravel deposits at Transect 4 outside the slurry wall (EMCON/OWT, October 2002).

As discussed in Section 3.1.4, hydraulic monitoring during the fourth quarter of 2002 included a re-evaluation of the hydraulic head data based on the considerable pumping influence of the sand and gravel pumping wells. It was demonstrated that hydraulic control was maintained in the sand and gravel unit, and groundwater in the bedrock was ultimately captured by the pumping wells, resulting in overall containment of groundwater in OU1. While this analysis was not specifically performed for the third quarter of 2002, a review of the pumping records indicated that, except for occasional periods, the combined pumping rates for two sand and gravel pumping wells (S&G Well #2 and S&G Well #3) were relatively consistent throughout the year. EMCON/OWT concluded that hydraulic control was maintained in OU1 during the third quarter of 2002 (EMCON/OWT, February 2003).

Leachate Withdrawal/Groundwater Pumping

The third quarter average daily groundwater extraction rate for the four sand and gravel groundwater pumping wells was approximately 26,177 gpd. The total volume of groundwater collected was approximately 2,355,924 gallons. Leachate was collected at an average daily rate of approximately 1,177 gpd, and the total volume of leachate collected was approximately 105,948 gallons (EMCON/OWT, October 2002).

For a 3-week period in September 2002, groundwater extraction at one of the sand and gravel groundwater pumping wells (S&G Well #2) was increased to approximately 15 gallons per minute (gpm). The effects of pumping at these rates on groundwater elevations were evaluated to determine whether intragradient conditions across the slurry wall within the sand and gravel unit, and upward vertical gradients between the bedrock and overlying sand and gravel could be consistently attained (EMCON/OWT, October 2002).

The results of the analysis indicated that prolonged periods of pumping at higher rates may have had a minor effect on attainment of intragradient conditions within the sand and gravel at Transect 2 (near S&G Well #2), but little or no significant vertical gradient control between the sand and gravel and the bedrock. Based on these results, recommendations were made to reduce the pumping rates to slightly higher than the originally proposed rates (EMCON/OWT, October 2002).

3.1.4 Fourth Quarter – 2002

Hydraulic Monitoring

Hydraulic monitoring indicated that intragradient conditions in the refuse unit were maintained at Transects 2, 3, 4, and 5. The leachate collection system functioned properly, suggesting that intragradient conditions were being maintained in the refuse unit at Transect 1, even though water levels in monitoring wells W-1G and W-2G did not indicate this condition (EMCON/OWT, February 2003).

Analysis of the hydraulic control for OU1 entailed a re-evaluation of the hydraulic head data based on the considerable pumping influence of the sand and gravel pumping wells, in particular S&G Well #2. The influence of the pumping wells was demonstrated by the analysis of plan view groundwater contour maps of the sand and gravel unit, and equipotential profiles and vector diagrams prepared for OU1. It was demonstrated that hydraulic control was maintained in the sand and gravel unit, and groundwater in the bedrock was ultimately captured by the pumping wells, resulting in overall containment of groundwater in OU1. Combined pumping rates for S&G Well #2 and S&G Well #3 were between 20,000 and 30,000 gpd (EMCON/OWT, February 2003).

While this analysis was not performed specifically for the first three quarters of 2002, a review of the pumping records indicated that, except for occasional periods, combined pumping rates for S&G Well #2 and S&G Well #3 were generally maintained between 20,000 and 30,000 gpd. Accordingly, in view of the analysis performed during this quarter, EMCON/OWT concluded that hydraulic control was maintained through 2002 in OU1.

Leachate Withdrawal/Groundwater Pumping

The fourth quarter average daily groundwater extraction rate for the four sand and gravel groundwater pumping wells was approximately 23,889 gpd. The total volume of groundwater collected was approximately 2,197,754 gallons. Leachate was collected at an average daily rate of approximately 1,662 gpd, and the total volume of leachate collected was approximately 152,928 gallons (EMCON/OWT, February 2003).

3.2 Landfill Gas Migration Monitoring

First Quarter – 2002

Combustible gas was not detected in the six gas monitoring wells located on the north side of OU1 (Figure 3). The active gas collection system was functioning properly, and there was no apparent offsite gas migration. Monitoring at the flare inlet port by landfill personnel indicated that the landfill gas collection system was delivering an average of 42.6% combustible gas to the flare (EMCON/OWT, May 2002).

Second Quarter – 2002

Combustible gas was not detected in the six gas monitoring wells located on the north side of OU1 (Figure 3). The active gas collection system was functioning properly, and there was no apparent offsite gas migration. Monitoring at the flare inlet port by landfill personnel indicated that the landfill gas collection system was delivering an average of 42.6% combustible gas to the flare (EMCON/OWT, September 2002).

Third Quarter – 2002

Combustible gas was not detected in the six gas monitoring wells located on the north side of OU1 (Figure 3). The active gas collection system was functioning properly, and there was no apparent offsite gas migration. Monitoring at the flare inlet port by landfill personnel indicated that the landfill gas collection system was delivering an average of 57.7% combustible gas to the flare (EMCON/OWT, October 2002).

Fourth Quarter – 2002

Combustible gas was not detected in the six gas monitoring wells located on the north side of OU1 (Figure 3). The active gas collection system was functioning properly, and there was no apparent offsite gas migration. Monitoring at the flare inlet port by landfill personnel indicated that the landfill gas collection system was delivering an average of 52.8% combustible gas to the flare (EMCON/OWT, February 2003).

3.3 Groundwater Sampling and Analysis

This section presents the results of the groundwater samples collected during November and December 2002. Monitoring well purge and sample logs containing sampling information and field parameter measurements recorded during groundwater purging are included in Appendix A. Analytical data collected from OU1 refuse/fill, sand and gravel, and bedrock monitoring wells are summarized in Tables 6, 7, and 8, respectively. Analytical data collected from OU2 refuse/fill, sand and gravel, and bedrock monitoring wells are summarized in Tables 9, 10, and 11, respectively. Trip blank and field blank results are summarized in Table 12. Laboratory analytical data packages are provided in Attachment A.

3.3.1 Operable Unit 1 Refuse/Fill Monitoring Wells

As discussed in Section 2.3, monitoring wells W-2G and W-15G were pumped dry prior to parameter stabilization and were not sampled. Therefore, analytical data are not available to assess groundwater quality at Transect 1 and Transect 4 (inside the slurry wall). The results of groundwater samples collected outside the slurry wall at Transects 2, 3, 4, and 5 are discussed below.

Volatile Organic Compounds

VOCs were not detected at Transect 5. Benzene and chlorobenzene were identified at Transects 2, 3, and 4. Benzene concentrations ranged from 62 micrograms per liter (ug/L) (Transect 3) to 480 ug/L (Transect 4). Chlorobenzene concentrations ranged from 300 ug/L (Transect 3) to 490 ug/L (Transect 2).

Semivolatile Organic Compounds

Several SVOCs were detected at the four transects. Bis(2-ethylhexyl) phthalate was detected at all four transects at concentrations ranging from 0.88 ug/L (estimated) (Transect 5) to 3.4 ug/L (Transect 2). N-nitrosodiphenylamine was identified at Transects 2, 3, and 4 at concentrations of 1.3 ug/L (estimated), 13 ug/L, and 7.7 ug/L, respectively. Naphthalene was detected at Transects 2, 3, and 4. Concentrations at these transects were 20 ug/L, 59 ug/L, and 4.3 ug/L, respectively.

Other SVOCs identified at Transect 2 included 2,4-dimethylphenol, acenaphthene, p-chloro-m-cresol, and phenanthrene. 1,4-dichlorobenzene was detected at Transect 3. Transect 4 results identified 1,2-dichlorobenzene, 1,4-dichlorobenzene, acenaphthene, di-n-butyl phthalate, di-n-octyl phthalate, and phenol. Diethyl phthalate and di-n-octyl phthalate were detected at Transect 5.

Pesticides/PCBs

PCBs were not detected at any of the transects. Pesticides were not detected at Transect 2. Methoxychlor was detected at Transects 3 and 4 at concentrations of 0.08 ug/L and 0.06 ug/L, respectively. Heptachlor epoxide was identified at Transects 3 and 5, at concentrations of 0.098 ug/L and 0.0026 ug/L (estimated), respectively. At Transect 5, delta-BHC, endrin, and heptachlor were identified at concentrations of 0.012 ug/L, 0.022 ug/L, and 0.013, respectively.

Metals

Barium and manganese were identified at the four transects. Barium concentrations ranged from 0.0518 milligrams per liter (mg/L) (Transect 5) to 0.68 mg/L (Transect 3). Manganese concentrations ranged from 0.13 mg/L (Transect 4) to 0.948 mg/L (Transect 5). Nickel was identified at Transects 2, 4, and 5 at estimated concentrations of 0.026 mg/L, 0.0318 mg/L, and 0.0453 mg/L, respectively. Arsenic was identified at Transect 2 at an estimated concentration of 0.0504 mg/L.

General Chemistry

Cyanide and nitrate nitrogen were not detected at any of the transects. Concentrations of other parameters varied from transect to transect, but were typically greatest at Transect 2. The highest concentrations detected at Transect 2 are as follows: biochemical oxygen demand (BOD) – 35.8 mg/L, chemical oxygen demand (COD) – 232 mg/L, total phenolics – 0.044 mg/L, TDS – 1,920 mg/L, total organic carbon (TOC) – 65.3 mg/L, and TOX – 747 ug/L. The highest detection of chloride (669 mg/L) was identified at Transect 3.

3.3.2 Operable Unit 1 Sand and Gravel Monitoring Wells

As discussed in Section 1.3, monitoring wells were not installed in the sand and gravel unit at Transects 1 and 5 due to the absence of sand and gravel deposits in these areas. The results of groundwater samples collected outside the slurry wall at Transects 2, 3, and 4, and inside the slurry wall at Transect 2 are discussed below.

Volatile Organic Compounds

VOCs were not detected at Transect 4. Benzene and chlorobenzene were identified at Transect 3, outside the slurry wall. Chlorobenzene was identified at Transect 2, outside the slurry wall. With the exception of chlorobenzene at Transect 3, these concentrations were less than the concentrations identified in the overlying fill/refuse unit. Benzene, chlorobenzene, ethylbenzene, and toluene were identified at Transect 2, inside the slurry wall. The concentration of chlorobenzene was greater than the concentration identified outside the slurry wall.

Semivolatile Organic Compounds

Few SVOCs were identified in each of the transects. Fewer SVOCs were detected in the sand and gravel unit than the overlying refuse/fill unit. SVOC concentrations in the sand and gravel unit were generally similar or less than concentrations detected in the refuse/fill unit. Additionally, SVOC concentrations were generally greater inside the slurry wall than outside the slurry wall.

Pesticides/PCBs

Pesticides and PCBs were not detected at any of the transects.

Metals

Barium and manganese were detected at each of the transects. Nickel was identified at estimated concentrations outside the slurry wall at Transects 2 and 3, and inside the slurry wall at Transect 2. Arsenic was identified at an estimated concentration inside the slurry wall at Transect 2. Generally, concentrations of metals were greater inside the slurry wall than outside the slurry wall, and similar or greater than concentrations of metals in the overlying refuse/fill unit.

General Chemistry

Cyanide and nitrate nitrogen were not detected at any of the transects. Total phenolics were not detected at Transect 4 or outside the slurry wall at Transect 3. BOD was not detected outside the slurry wall at Transect 4. Concentrations of general chemistry parameters were greater inside the slurry wall than outside the slurry wall. With few exceptions, concentrations of general chemistry parameters were greater in the sand and gravel unit than the overlying refuse/fill unit.

3.3.3 Operable Unit 1 Bedrock Monitoring Wells

The results of groundwater samples collected inside and outside the slurry wall at all five transects are discussed below.

Volatile Organic Compounds

VOCs were not detected inside the slurry wall at Transects 3 and 5, and outside the slurry wall at Transects 4 and 5. Only methylene chloride was detected at Transect 1. The concentration of methylene chloride was greater inside the slurry wall (400,000 ug/L) than outside the slurry wall (290,000 ug/L). Chlorobenzene was detected at Transects 2 and 4 inside the slurry wall, and at Transect 2 outside the slurry wall. Chlorobenzene concentrations were greater inside the slurry wall than outside the slurry wall, and less than concentrations identified in the overlying sand and gravel unit. Benzene was identified outside the slurry wall at Transect 3 at a concentration of 180 ug/L.

Semivolatile Organic Compounds

SVOCs were not detected inside the slurry wall at Transect 5. Few SVOCs were identified inside and outside the slurry wall at the other transects. SVOC concentrations were similar inside and outside the slurry wall. Inside the slurry wall, SVOC concentrations were less than concentrations detected in the overlying sand and gravel unit. Outside the slurry wall, SVOC concentrations were generally similar to concentrations detected in the sand and gravel unit.

Pesticides/PCBs

PCBs were not detected at any of the transects. Pesticides were not detected inside the slurry wall at Transect 1, or outside the slurry wall at Transects 1, 4, and 5. Few pesticides were detected inside the slurry wall at Transects 4 and 5. These included endrin aldehyde at Transect 4 (0.0087 ug/L) and beta-BHC (0.011 ug/L) and gamma-BHC (.006 ug/L) at Transect 5. At Transect 3, methoxychlor was detected both inside and outside the slurry wall at concentrations of 0.0064 ug/L and 0.021 ug/L, respectively. At Transect 2, dieldrin was identified both inside and outside the slurry wall at concentrations of 0.0049 ug/L (estimated) and 0.008 ug/L, respectively. Endosulfan I, 4,4'-DDT, endosulfan sulfate, endrin, endrin aldehyde, and methoxychlor were identified outside the slurry wall at Transect 2.

Metals

Barium and manganese were detected inside and outside the slurry wall at each transect. Concentrations of barium inside the slurry wall ranged from 0.0729 mg/L (estimated) (Transect 1) to 1.35 mg/L (Transect 2). Concentrations of barium outside the slurry wall ranged from 0.973 mg/L (estimated) (Transect 1) to 3.15 mg/L (Transect 2). Manganese concentrations inside the slurry wall ranged from 0.568 mg/L (Transect 4) to 58.5 mg/L (Transect 1). Manganese concentrations outside the slurry wall ranged from 0.191 mg/L (Transect 5) to 36.6 mg/L (Transect 1). Nickel was identified inside the slurry wall at Transects 1 and 5, and outside the slurry wall at Transect 1. Beryllium, and zinc were identified outside the slurry wall at Transect 1. Metals concentrations were similar inside and outside the slurry wall, and similar to concentrations detected in the overlying units.

General Chemistry

Cyanide and nitrate nitrogen were not detected at any of the transects. Total phenolics were not detected inside the slurry wall at Transects 3, 4, and 5 or outside the slurry wall at Transects 4 and 5. BOD was not detected outside the slurry wall at Transects 2 and 5. Additionally, COD and TOC were not identified outside the slurry wall at Transect 5. Concentrations of general chemistry parameters were greater inside the slurry wall than outside the slurry wall at Transects 1 and 5.

3.3.4 Operable Unit 2 Refuse/Fill Monitoring Wells

As discussed in Section 2.3, monitoring well GEI-7G did not have sufficient water volume to purge or sample. Therefore, analytical data are not available to assess groundwater quality at this location. The results of groundwater samples collected at other OU2 locations are discussed below.

Volatile Organic Compounds

VOCs were not detected in monitoring wells GEI-3G and GEI-6G. Benzene was detected in monitoring well GEI-5G and GEI-10G at concentrations of 910 ug/L and 210 ug/L, respectively. Chlorobenzene was detected in monitoring well GEI-10G at 240 ug/L.

Semivolatile Organic Compounds

Several SVOCs were identified in the monitoring wells. Naphthalene, 1,4-dichlorobenzene, and n-nitrosodiphenylamine were detected in all four monitoring wells. Concentrations of naphthalene ranged from 0.59 ug/L (estimated) (GEI-3G) to 19 (GEI-10G). However, naphthalene was detected in the blank associated with sample GEI-10G. Concentrations of 1,4-dichlorobenzene ranged from 1.5 ug/L (estimated) (GEI-6G) to 5.3 ug/L (GEI-10G). Concentrations of n-nitrosodiphenylamine ranged from 1.8 ug/L (estimated) (GEI-6G) to 8.0 ug/L (GEI-10G). 1,2-dichlorobenzene was detected in monitoring wells GEI-3G, GEI-5G, and GEI-10G at concentrations of 0.61 ug/L (estimated), 2.2 ug/L, and 1.2 ug/L (estimated), respectively.

Other SVOCs identified in monitoring well GEI-3G included acenaphthene, di-n-butyl phthalate, di-n-octyl phthalate, fluorine, and phenol. Bis(2-ethylhexyl) phthalate, di-n-butyl phthalate, and di-n-octyl phthalate were detected at monitoring well GEI-5G. Monitoring well GEI-6G results identified bis(2-ethylhexyl) phthalate and di-n-octyl phthalate. Acenaphthene, acenaphthylene, fluorene, phenanthrene, and phenol were detected at monitoring well GEI-10G.

Pesticides/PCBs

PCBs were not detected in any of the monitoring wells. Pesticides were not detected in monitoring well GEI-3G. Methoxychlor was detected in monitoring wells GEI-5G, GEI-6G, and GEI-10G at concentrations of 0.18 ug/L, 0.12 ug/L, and 0.36 ug/L, respectively. Delta-BHC was detected in monitoring well GEI-5G at a concentration of 0.18 ug/L and in GEI-6G at a concentration of 0.11 ug/L. Endosulfan II and endrin aldehyde were detected in monitoring well GEI-6G at concentrations of 0.051 ug/L and 0.19, respectively.

Metals

Barium and manganese were identified in the four monitoring wells. Barium concentrations ranged from 0.162 mg/L (GEI-6G) to 0.74 mg/L (GEI-10G). Manganese concentrations ranged from 0.0749 mg/L (estimated) (GEI-6G) to 0.35 mg/L (GEI-3G). Nickel was identified in monitoring wells GEI-5G and GEI-10G at estimated concentrations of 0.0362 mg/L and 0.043 mg/L, respectively, and in monitoring well GEI-6G at a concentration of 0.146 mg/L.

General Chemistry

Cyanide was not detected in monitoring wells GEI-3G, GEI-5G, and GEI-10G. Nitrate nitrogen was not detected at monitoring wells GEI-3G and GEI-10G. Chloride and TDS were not detected in monitoring well GEI-5G. However, these results are most likely due to a field event error, based on historical data. Concentrations of general chemistry parameters varied from well to well, but were greatest at monitoring well GEI-6G. The highest concentrations detected at GEI-6G are as follows: BOD – 52.6 mg/L, COD – 727 mg/L, chloride – 1,600 mg/L, cyanide – 0.14 ug/L, nitrate nitrogen – 14.9 mg/L, total phenolics – 0.11 mg/L, TDS – 4,570 mg/L, TOC – 198 mg/L, and TOX – 2,400 ug/L.

3.3.5 Operable Unit 2 Sand and Gravel Monitoring Wells

Volatile Organic Compounds

VOCs were not detected in monitoring well WE-10S. Benzene was detected in monitoring wells WE-5S and GEI-6S at concentrations of 350 ug/L and 97 ug/L, respectively. Toluene was identified in monitoring well WE-3S at a concentration of 320 ug/L. Chlorobenzene was detected in monitoring well WE-7S at a concentration of 210 ug/L.

Semivolatile Organic Compounds

SVOCs were not detected in monitoring well WE-10S. Fewer SVOCs were identified in the sand and gravel unit than in the overlying refuse unit. 2,4-dimethylphenol was detected in monitoring wells WE-3S, WE-5S, and WE-7S at concentrations of 510 ug/L, 5.1 ug/L, and 3.3 ug/L, respectively. Other SVOCs detected in monitoring well WE-7S (1,3-dichlorobenzene, 1,4-dichlorobenzene, 2-chlorophenol, acenaphthene, di-n-octyl phthalate, and phenol) were detected at low, estimated concentrations. Monitoring well WE-3S results identified 1,2-dichlorobenzene at an estimated concentration and p-chloro-m-cresol at 78 ug/L. Acenaphthene and phenanthrene were identified in monitoring well WE-5S. Naphthalene, n-nitrosodiphenylamine, and phenanthrene were detected in monitoring well GEI-6S.

Pesticides/PCBs

PCBs were not detected in any of the monitoring wells. Pesticides were not detected in monitoring well WE-5S. Delta-BHC was detected in monitoring wells WE-3S and GEI-6S at concentrations of 0.3 ug/L and 0.26, respectively. Results from monitoring well GEI-6S also identified beta-BHC and methoxychlor at concentrations of 0.47 ug/L and 0.12 ug/L, respectively. Aldrin and dieldrin were identified in monitoring well WE-7S at concentrations of 0.053 and 0.18, respectively. Endrin aldehyde, methoxychlor, and 4,4'-DDT were detected in monitoring well WE-10 S at concentrations of 0.009 ug/L, 0.0057, and 0.0099, respectively.

Metals

Barium and manganese were identified in the five monitoring wells. Barium concentrations ranged from 0.39 mg/L (WE-7S) to 0.769 mg/L (WE-5S). Manganese concentrations ranged from 0.245 mg/L (GEI-6S) to 3.05 mg/L (WE-5S). Nickel was identified in monitoring wells WE-3S, WE-5S, and WE-7S at estimated concentrations of 0.0316 mg/L, 0.0313 mg/L, and 0.028 mg/L, respectively, and in monitoring well GEI-6S at a concentration of 0.0444 mg/L. Vanadium was detected in monitoring well WE-5S at an estimated concentration of 0.0116 mg/L and in monitoring well WE-3S at a concentration of 0.0702 mg/L.

General Chemistry

Cyanide and nitrate nitrogen were not detected in the monitoring wells. BOD and total phenolics were not detected in monitoring well WE-10S. Concentrations of general chemistry parameters varied from well to well, but were typically greatest at monitoring well WE-3S. The highest concentrations detected at WE-3S were as follows: COD – 1,040 mg/L, chloride – 3,210 mg/L, total phenolics – 0.31 mg/L, and TOC – 283 mg/L. The greatest concentration of BOD was in monitoring well GEI-6S, 21.6 mg/L. The greatest concentrations of TDS and TOX were in monitoring wells WE-10S (10,900 ug/L) and WE-5S (5,580 ug/L), respectively.

3.3.6 Operable Unit 2 Bedrock Monitoring Wells

Volatile Organic Compounds

VOCs were not detected in OU2 bedrock wells, including WE-114DR, the background bedrock monitoring well.

Semivolatile Organic Compounds

SVOCs were not detected in monitoring well WE-7R. Fewer SVOCs were identified in the bedrock aquifer than in the overlying sand and gravel and refuse units. Low, estimated concentrations of 2,4-dimethylphenol and p-chloro-m-cresol were identified in monitoring well WE-5R. A low, estimated concentration of n-nitrosodiphenylamine was detected in monitoring well WE-6R. Low, estimated concentrations of di-n-octyl phthalate were identified in monitoring wells WE-3R and WE-6R, and naphthalene was detected in monitoring well WE-10R. However, these compounds were also identified in associated method blanks, and the detections are believed to be the result of a laboratory error.

SVOCs were not detected in WE-114DR, the background bedrock monitoring well.

Pesticides/PCBs

PCBs were not detected in any of the monitoring wells. Pesticides were not detected in monitoring wells WE-7R and WE-10R. Delta-BHC was identified in monitoring wells WE-3R, WE-5R, and WE-6R at concentrations of 0.004 ug/L (estimated), 0.0059 ug/L, and 0.065 ug/L, respectively. 4,4'-DDT was identified in monitoring wells WE-3R and WE-5R at concentrations of 0.0061 ug/L and 0.007 ug/L, respectively.

PCBs and pesticides were not detected in WE-114DR, the background bedrock monitoring well.

Metals

Barium, manganese, and nickel were identified in the five monitoring wells. Barium concentrations ranged from 0.088 mg/L (WE-7R) to 0.47 mg/L (WE-6R). Manganese concentrations ranged from 0.779 mg/L (WE-3R) to 2.61 mg/L (WE-10R). Nickel concentrations ranged from 0.0326 mg/L (estimated) (WE-5R) to 0.18 mg/L (estimated) (WE-10R). Arsenic was detected in monitoring well WE-10R at an estimated concentration of 0.11 mg/L.

Barium and manganese were detected in WE-114DR, the background bedrock monitoring well, at concentrations of 0.0534 mg/L and 0.468 mg/L, respectively.

General Chemistry

Cyanide and nitrate nitrogen were not detected in the monitoring wells. BOD and total phenolics were not detected in monitoring wells WE-3R, WE-5R, WE-7R, and WE-10R. Concentrations of general chemistry parameters varied from well to well, but were typically greatest at monitoring well WE-6R. The highest concentrations detected at WE-6R were as follows: BOD – 9.6 mg/L, COD – 234 mg/L, total phenolics – 0.01 mg/L, TOC – 24.8 mg/L, and TOX – 180 ug/L. The greatest concentration of chloride was in monitoring well WE-10R (6,540 mg/L). The greatest concentration of TDS was in monitoring well WE-3R (11,700 mg/L).

COD, cyanide, nitrate nitrogen, and total phenolics were not detected in WE-114DR, the background bedrock monitoring well. Results for the other general chemistry parameters are as follows: BOD – 8.1 mg/L, chloride – 56.1 mg/L, TDS – 561 mg/L, TOC – 2.3 mg/L, and TOX – 24.5 ug/L.

3.4 Surface-Water Sampling and Analysis

This section presents the results of the surface-water samples collected on November 21, 2002. Analytical results are summarized in Table 13. Field parameter measurements recorded during surface-water sampling activities are presented in Table 14. Trip blank and field blank results are summarized in Table 12. Laboratory analytical data packages are provided in Attachment A.

Volatile Organic Compounds

VOCs were not detected in any of the surface-water samples.

Semivolatile Organic Compounds

One SVOC, di-n-octyl phthalate, was detected in surface-water sample SW-04 at an estimated concentration of 0.42 ug/L.

Pesticides/PCBs

PCBs were not detected in the surface-water samples. Delta-BHC, endosulfan I, and dieldrin were detected in surface-water sample SW-01, upstream of the site, at concentrations of 0.017 ug/L, 0.0052 ug/L, and 0.013 ug/L, respectively. Endosulfan I was detected at an estimated concentration of 0.0048 ug/L in surface-water sample SW-02. Endrin aldehyde was detected in surface-water samples SW-03 and SW-04 at concentrations of 0.0058 ug/L and 0.0049 (estimated), respectively.

Metals

Barium was detected in all four surface-water samples at concentrations ranging from 0.048 mg/L (SW-04, downstream from the site) to 0.11 mg/L (SW-01, upstream of the site). Manganese was detected in all four surface-water samples. Concentrations ranged from 0.067 mg/L (estimated) at SW-03 to 0.25 mg/L at SW-01.

General Chemistry

BOD and cyanide were not detected in the surface-water samples. Total phenolics were not detected in sample SW-02. Other general chemistry parameters were relatively consistent in the four samples.

3.5 Natural Attenuation Monitoring

This section presents the results of the natural attenuation parameters collected during November and December, 2002. Parameter measurements collected during groundwater purging activities (e.g., dissolved oxygen, ORP, sulfate, and ferrous iron) are included in Appendix A. Analytical data for other parameters (e.g., chloride and methane) are summarized in Tables 6 through 11. Trip blank and field blank results are summarized in Table 12. Laboratory analytical data packages are provided in Attachment A.

As discussed in Sections 3.3.4 through 3.3.6, VOCs detected in the OU2 monitoring wells include benzene, chlorobenzene, and toluene. These compounds can be degraded aerobically or anaerobically; however, anaerobic degradation occurs at a much slower rate than aerobic degradation. Natural attenuation parameters are measured to provide information on the degradation of organic compounds at the site.

Dissolved oxygen concentrations in the OU2 wells ranged from 0.2 mg/L (GEI-3G) to 4.6 mg/L (WE-3R). On average, the lowest dissolved oxygen concentrations were identified in the refuse/fill monitoring wells, and the highest dissolved oxygen concentrations were identified in the bedrock monitoring wells. Generally, historical and recent dissolved oxygen concentrations were less than 2 mg/L in monitoring wells with detections of VOCs. Dissolved concentrations of less than 2 mg/L generally indicate an anaerobic groundwater environment. Monitoring well WE-7S is an exception. Benzene and chlorobenzene were detected in the 2000 and 2001 sampling events, and the dissolved oxygen concentration measured during this sampling event was 4.26 mg/L. This elevated dissolved oxygen concentration may be a result of the shallow depth of WE-7S and its location proximate to the Raritan River.

ORP values in all of the OU2 monitoring wells were negative. In general, ORP values were greater where dissolved oxygen concentrations were greater, and lower where dissolved oxygen concentrations were lower. The presence of negative ORP, coupled with the generally anaerobic conditions, is indicative of a strongly reducing groundwater environment.

Sulfate was depleted in all of the monitoring wells in the refuse and fill layer. Sulfate was also depleted in monitoring wells WE-5S, GEI-6S, and WE-7S. Sulfate may have been depleted in these areas due to

degradation of organic material by sulfate reduction. Ferrous iron concentrations were similar in all of the OU2 monitoring wells, ranging from 1.5 mg/L (GEI-6G and GEI-6S) to 3.4 mg/L (WE-5R). Since ferrous iron concentrations were similar across all of the monitoring wells, it is unlikely that iron reduction is a major component of degradation of organic material.

The presence of elevated methane concentrations with depleted dissolved oxygen concentrations indicates that geochemical conditions are strongly reducing. The greatest methane concentration was observed in monitoring well GEI-3G (6,300 ug/L). Monitoring well GEI-3G had the lowest dissolved oxygen concentration, and benzene and chlorobenzene have been detected in this well in previous sampling events. Methane is produced in the methanogenesis of organic compounds. This process can degrade the compounds observed in OU2 at a slow rate.

Chloride was elevated in many of the OU2 monitoring wells. The background bedrock well WE-114DR had a chloride concentration of 56.1 mg/L. All of the other bedrock monitoring wells had chloride concentrations greater than 2,950 mg/L. In the sand and gravel unit, all of the monitoring wells had chloride concentrations greater than 2,040 mg/L, with the exception of GEI-6S (482 mg/L). In the refuse and fill unit, the monitoring wells had chloride concentrations greater than 1,100 mg/L, with the exceptions of GEI-3G (93.8 mg/L) and GEI-5G (not detected). The elevated chloride concentrations in the OU2 monitoring wells may be a result of the degradation of chlorinated organic compounds, as chloride is the ultimate end-product in their degradation.

4. Conclusions/Recommendations

4.1 Conclusions

As documented in this report, SCA has successfully completed fourth quarter and annual monitoring activities at the site. Water-quality, hydraulic, and landfill gas monitoring activities were performed in accordance with USEPA-approved work plans to evaluate the effectiveness of past remedial actions performed at the site. Key findings of the fourth quarter and annual monitoring activities are summarized in the following sections.

4.1.1 Hydraulic Monitoring and Leachate Withdrawal/Groundwater Pumping

Hydraulic monitoring indicated that intragradient conditions in the OU1 refuse unit were maintained at Transects 2, 3, 4, and 5. The leachate collection system functioned properly, suggesting that intragradient conditions were also being maintained in the refuse unit at Transect 1 (EMCON/OWT, February 2003).

Hydraulic control was maintained within OU1 based on the analysis of the significant influence of sand and gravel pumping wells (S&G Well #2 and S&G Well #3) in acting as a hydraulic sink for sand and gravel and bedrock groundwater. Groundwater flow in the sand and gravel and bedrock is ultimately captured by the pumping wells resulting in overall containment of groundwater in OU1 (EMCON/OWT, February 2003).

4.1.2 Landfill Gas Migration Monitoring

Combustible gas was not detected in the six gas monitoring wells located on the north side of OU1. The active gas collection system was functioning properly, and there was no apparent offsite gas migration. Monitoring at the flare inlet port by landfill personnel indicated that the landfill gas collection system was delivering an average of 52.8% combustible gas to the flare (EMCON/OWT, February 2003).

4.1.3 Groundwater Sampling and Analysis

Analytical results for OU1 and OU2 groundwater samples are summarized below.

Operable Unit 1

- Benzene, chlorobenzene, ethylbenzene, toluene, and methylene chloride were the sole VOCs detected. Generally, VOC concentrations were greater inside the slurry wall than outside the slurry wall. With few exceptions, VOC concentrations were greater in the refuse/fill layer than the underlying sand and gravel and bedrock units.

- Several SVOCs were detected in the refuse/fill monitoring wells. Few SVOCs were identified in the sand and gravel and bedrock monitoring wells. In the sand and gravel unit, SVOC concentrations were generally greater inside the slurry wall than outside the slurry wall. Additionally, SVOC concentrations were generally similar to or less than concentrations in the overlying refuse/fill unit. In the bedrock, SVOC concentrations were similar inside and outside the slurry wall. Inside the slurry wall, SVOC concentrations were less than concentrations in the overlying sand and gravel unit. Outside the slurry wall, SVOC concentrations were generally similar to concentrations detected in the sand and gravel unit.

- PCBs were not detected in any of the monitoring wells.

- Pesticides were not detected in the sand and gravel monitoring wells. Generally, pesticides identified in the refuse/fill monitoring wells were different than those in the bedrock monitoring wells. Pesticide concentrations at some transects were greater inside the slurry wall than outside the slurry wall; however, this condition was not present at all transects.

- Barium, manganese, arsenic, nickel, beryllium, and zinc were the sole metals detected. In the sand and gravel monitoring wells, metal concentrations were generally greater inside the slurry wall than outside the slurry wall, and similar to or greater than concentrations detected in the overlying refuse/fill unit. In the bedrock monitoring wells, metal concentrations were similar inside and outside the slurry wall, and similar to concentrations detected in the overlying units.

- General chemistry parameters varied from monitoring well to monitoring well. Concentrations of general chemistry parameters were greater inside the slurry wall than outside the slurry wall in the sand and gravel unit and in certain transects in the bedrock. With few exceptions, concentrations of general chemistry parameters in the sand and gravel wells were greater than in the refuse/fill wells and similar to the concentrations in the bedrock.

Operable Unit 2

- Benzene, chlorobenzene, and toluene were the sole VOCs detected. VOCs were not detected in the bedrock monitoring wells. Generally, VOC concentrations were similar to or less than VOC concentrations detected in OU1 monitoring wells.

- Several SVOCs were detected in the refuse/fill monitoring wells. Fewer SVOCs were identified in the sand and gravel and bedrock monitoring wells. SVOCs identified were similar to those identified in OU1 monitoring wells.

- PCBs were not detected in any of the monitoring wells.

- Several pesticides were detected at low concentrations in the refuse/fill, sand and gravel, and bedrock monitoring wells.

- Barium, manganese, arsenic, nickel, and vanadium were the sole metals detected. Generally, metal concentrations were similar to those detected in OU1 monitoring wells. Barium and manganese were also detected in the background bedrock monitoring well (WE-114DR).

- General chemistry parameters varied from monitoring well to monitoring well. In general, general chemistry parameter concentrations were greater in the sand and gravel monitoring wells than either the refuse/fill or bedrock monitoring wells. General chemistry parameter concentrations were typically higher in the bedrock monitoring wells than in the background bedrock monitoring well.

4.1.4 Surface-Water Sampling and Analysis

Few pesticides and metals were detected in surface-water samples collected from the Raritan River. It is unlikely that these constituents are attributable to the site groundwater. Site groundwater contains a variety of VOCs, SVOCs, pesticides, and metals. If site groundwater were impacting surface-water quality, the other constituents detected in site groundwater would likely also be identified in the surface-water samples.

Additionally, most pesticides were identified in surface-water sample SW-01, the sample location farthest upriver of the site. Barium and manganese were detected in all four surface-water samples; however, the highest concentrations of both analytes were also identified in sample SW-01. The metals results may be representative of background conditions. Both metals were identified in background monitoring well WE-114DR.

4.1.5 Natural Attenuation Monitoring

Current data collected from OU2 monitoring wells indicate that the majority of the groundwater has low concentrations of dissolved oxygen, highly negative ORP values, and elevated methane concentrations, especially in monitoring wells where organic compounds are present. This highly reducing geochemical environment is very conducive to the biodegradation of chlorinated organic compounds. The presence of chloride at elevated concentrations is indicative of degradation of chlorinated organic compounds. Aromatic compounds such as benzene, chlorobenzene, and toluene observed in OU2 monitoring wells can be degraded under these conditions; however, anaerobic degradation of these compounds occurs at a much slower rate than degradation under aerobic conditions.

4.2 Recommendations

Based on the results of the fourth quarter and annual monitoring activities, SCA recommends the following activities:

- Maintain groundwater pumping rates in the sand and gravel at 15,000 gpd, with S&G Well #2 pumping at approximately 10,000 gpd and S&G Well #3 pumping at approximately 5,000 gpd;
- Evaluate pumping rates at sand and gravel pumping wells to confirm continued hydraulic control of OU1 groundwater; and
- Maintain a leachate collection rate of 1,500 gpd.

5. References

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Table 1
Operable Unit 1 Modified Program Groundwater Monitoring Well Network/Transects
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Transect Location No.	Screened Hydrogeologic Unit	Well ID Inside Slurry Wall	Well ID Outside Slurry Wall
1	Refuse/Fill		W-2G
	Bedrock	W-1R	W-2R
2	Refuse/Fill		W-4G
	Sand and Gravel	W-3S	W-4S
	Bedrock	W-3RR	W-4R
3	Refuse/Fill		W-6G
	Sand and Gravel		W-6S
	Bedrock	W-5R	W-6R
4	Refuse/Fill	W-15G	W-13G
	Sand and Gravel		W-13S
			W-8S
	Bedrock	W-7R	W-8RR
5	Refuse/Fill		W-10G
	Bedrock	W-9R	W-10R

Table 2
Operable Unit 2 Modified Program Groundwater and Surface-Water Monitoring Locations
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Well ID	Screened Hydrogeologic Unit
Low-Lying Area	
GEI-3G	Refuse/Fill
WE-3S	Sand and Gravel
WE-3R	Bedrock
GEI-10G	Refuse/Fill
WE-10S	Sand and Gravel
WE-10R	Bedrock
Mound B	
GEI-5G	Refuse/Fill
WE-5S	Sand and Gravel
WE-5R	Bedrock
GEI-6G	Refuse/Fill
GEI-6S	Sand and Gravel
WE-6R	Bedrock
GEI-7G	Refuse/Fill
WE-7S	Sand and Gravel
WE-7R	Bedrock
Upgradient	
WE-114DR	Bedrock
Surface Water	
SW-01	Raritan River
SW-02	Raritan River
SW-03	Raritan River
SW-04	Raritan River

Table 3
Operable Unit 1 Groundwater Sampling Summary
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Well ID	Purging/Sampling Device	Purge Rate (L/min)	Total Drawdown (ft)	Did field parameters stabilize?	Comments
W-1R	Bladder pump	0.10	2.01	yes	
W-2G	--	--	--	--	Went dry while purging, not sampled
W-2R	Bladder pump	0.10	0.80	yes	
W-3S	Bladder pump	0.19	0.06	yes	
W-3RR	Bladder pump	0.29	0.25	yes	
W-4G	Bladder and peristaltic pumps	0.09	2.80	yes	Went dry while sampling, recharged, and completed sampling with peristaltic
W-4S	Bladder pump	0.27	0.18	yes	
W-4R	Bladder pump	0.20	0.21	yes	
W-5R	Bladder pump	0.19	0.05	yes	
W-6G	Peristaltic pump	0.27	0.16	yes	Obstruction at 16.0 ft prevented use of bladder pump
W-6S	Peristaltic pump	0.14	0.03	yes	Obstruction at 13.5 ft prevented use of bladder pump
W-6R	Bladder pump	0.22	2.69	yes	
W-7R	Bladder pump	0.19	0.72	yes	
W-8RR	Bladder pump	0.24	0.36	yes	
W-8S	Bladder pump	0.21	0.02	yes	
W-9R	Bladder pump	0.09	1.68	yes	
W-10G	Peristaltic pump	0.15/0.08*	2.34/1.10*	yes	Went dry while sampling, recharged, and completed sampling
W-10R	Bladder pump	0.10	3.60	yes	
W-13G	Bladder pump	0.31	0.32	yes	
W-13S	Bladder pump	0.24	0.04	yes	
W-15G	--	--	--	--	Went dry while purging, not sampled

Note:
* - Well was purged twice (November 12 and December 5, 2002).

Table 4
Operable Unit 2 Groundwater Sampling Summary
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Well ID	Purging/Sampling Device	Purge Rate (L/min)	Total Drawdown (ft)	Did field parameters stabilize?	Comments
GEI-3G	Bladder pump	0.29	0.05	yes	
WE-3S	Bladder pump	0.20	0.13	yes	
WE-3R	Bladder pump	0.17	0.75	yes	
GEI-5G	Bladder pump	0.13	0.60	yes	
WE-5S	Bladder pump	0.29	0.05	yes	
WE-5R	Bladder pump	0.19	0.75	yes	
GEI-6G	Bladder pump	0.13	1.11	yes	
GEI-6S	Peristaltic pump	0.22	0.11	yes	Obstruction at 20.0 ft prevented use of bladder pump
WE-6R	Bladder pump	0.24	1.31	yes	
GEI-7G	--	--	--	--	Insufficient volume of water, not purged or sampled
WE-7S	Bladder pump	0.19	-0.06	yes	
WE-7R	Bladder pump	0.14	5.50	yes	
GEI-10G	Bladder pump	0.30	0.06	yes	
WE-10S	Bladder pump	0.24	0.05	yes	
WE-10R	Bladder pump	0.17	1.60	yes	
WE-114DR	Bladder pump	0.16	1.60	yes	

Table 5
Operable Units 1 and 2 Modified Groundwater Monitoring Plan Parameters
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Parameters	Method
Alkalinity	Field
Antimony	EPA 200.7
Arsenic	EPA 200.7
Barium	EPA 200.7
Beryllium	EPA 200.7
Biological Oxygen Demand (BOD)	EPA 405.1
Cadmium	EPA 200.7
Chloride	EPA 325.2
Chemical Oxygen Demand (COD)	EPA 410.4
Cyanide	EPA 335.3
Dissolved Oxygen (DO)	Field
Iron II	Field
Lead	EPA 200.7
Manganese	EPA 200.7
Mercury	EPA 245.1
Methane/Ethane/Ethene	RSK 175
Nickel	EPA 200.7
Nitrate Nitrogen	EPA 353.2
Oxidation-Reduction Potential (ORP)	Field
pH	Field
Phenolic Compounds	EPA 420.2
PP Acid/Base Neutrals	EPA 625
PP Pesticides/PCBs (including Lindane, DDT, metabolites, and methooxychlor)	EPA 608
PP Volitale Organics (including dichlorobenzene isomers)	EPA 624
Specific Conductivity	Field
Sulfate	Field
Sulfide	Field
Temperature	Field
Total Dissolved Solids (TDS)	EPA 160.1
Total Organic Carbon (TOC)	EPA 415.1
Total Organic Halides (TOX)	EPA 9020
Turbidity	Field
Vanadium	EPA 200.7
Zinc	EPA 200.7

PP = Priority Pollutant
PCBs = Polychlorinated biphenyls

Table 6
Summary of Analytical Results - Operable Unit 1 Refuse/Fill Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	W-4G	W-6G	W-10G	W-13G	W-13G DL
Lab Sample Number	A2B43904	A2B33205	A2B24001	A2B43902	A2B43902DL
Sampling Date	11/15/2002	11/13/2002	11/12/2002	11/15/2002	11/15/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Volatile Organic Compounds (ug/L)					
1,1,1-Trichloroethane	38 U	15 U	4 U	4 U	38 U
1,1,2,2-Tetrachloroethane	69 U	28 U	7 U	7 U	69 U
1,1,2-Trichloroethane	50 U	20 U	5 U	5 U	50 U
1,1-Dichloroethane	47 U	19 U	5 U	5 U	47 U
1,1-Dichloroethene	28 U	11 U	3 U	3 U	28 U
1,2-Dichloroethane	50 U	20 U	5 U	5 U	50 U
1,2-Dichloroethene (Total)	50 U	20 U	5 U	5 U	50 U
1,2-Dichloropropane	60 U	24 U	6 U	6 U	60 U
2-Chloroethylvinyl ether	100 U	40 U	10 U	10 U	100 U
Acrolein	4000 U	1600 U	400 U	400 U	4000 U
Acrylonitrile	4000 U	1600 U	400 U	400 U	4000 U
Benzene	280	62	4 U	480 E	480 D
Bromoform	47 U	19 U	5 U	5 U	47 U
Bromomethane	100 U	40 U	10 U	10 U	100 U
Carbon Tetrachloride	28 U	11 U	3 U	3 U	28 U
Chlorobenzene	490	300	6 U	330 E	310 D
Chloroethane	100 U	40 U	10 U	10 U	100 U
Chloroform	16 U	6 U	2 U	2 U	16 U
Chloromethane	100 U	40 U	10 U	10 U	100 U
cis-1,3-Dichloropropene	50 U	20 U	5 U	5 U	50 U
Dibromochloromethane	31 U	12 U	3 U	3 U	31 U
Dichlorobromomethane	22 U	9 U	2 U	2 U	22 U
Ethylbenzene	72 U	29 U	7 U	7 U	72 U
Methylene chloride	35 U	14 U	4 U	4 U	35 U
Tetrachloroethene	41 U	16 U	4 U	4 U	41 U
Toluene	60 U	24 U	6 U	6 U	60 U
trans-1,3-Dichloropropene	50 U	20 U	5 U	5 U	50 U
Trichloroethene	19 U	8 U	2 U	2 U	19 U
Vinyl chloride	100 U	40 U	10 U	10 U	100 U

Notes:
U - Compound was analyzed for, but not detected.
E - Concentration exceeded the calibration range of the instrument for that specific analysis.
D - Compound analyzed at a secondary dilution factor.

Table 6
Summary of Analytical Results - Operable Unit 1 Refuse/Fill Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	W-4G	W-6G	W-10G RE	W-13G
Lab Sample Number	A2B43904	A2B48902	A2B24001RE	A2B43902
Sampling Date	11/15/2002	11/18/2002	11/12/2002	11/15/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Semivolatile Organic Compounds (ug/L)				
1,2,4-Trichlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U
1,2-Dichlorobenzene	1.9 U	1.9 U	1.9 U	0.63 J
1,2-Diphenylhydrazine	1.8 U	1.8 U	1.0 U	1.0 U
1,3-Dichlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U
1,4-Dichlorobenzene	4.4 U	6.1	4.4 U	6.0
2,2'-Oxybis(1-Chloropropane)	5.7 U	5.7 U	5.7 U	5.7 U
2,4,6-Trichlorophenol	2.7 U	2.7 U	2.7 U	2.7 U
2,4-Dichlorophenol	2.7 U	2.7 U	2.7 U	2.7 U
2,4-Dimethylphenol	2.8	2.7 U	2.7 U	2.7 U
2,4-Dinitrophenol	42 U	42 U	42 U	42 U
2,4-Dinitrotoluene	5.7 U	5.7 U	5.7 U	5.7 U
2,6-Dinitrotoluene	1.9 U	1.9 U	1.9 U	1.9 U
2-Chloronaphthalene	1.9 U	1.9 U	1.9 U	1.9 U
2-Chlorophenol	3.3 U	3.3 U	3.3 U	3.3 U
2-Nitrophenol	3.6 U	3.6 U	3.6 U	3.6 U
3,3'-Dichlorobenzidine	16 U	16 U	16 U	16 U
4-Bromophenyl phenyl ether	1.9 U	1.9 U	1.9 U	1.9 U
4-Chlorophenyl phenyl ether	1.8 U	1.8 U	1.0 U	1.0 U
4-Nitrophenol	2.4 U	2.4 U	2.4 U	2.4 U
Acenaphthene	1.3 J	1.9 U	1.9 U	0.41 J
Acenaphthylene	3.5 U	3.5 U	3.5 U	3.5 U
Anthracene	1.9 U	1.9 U	1.9 U	1.9 U
Benzidine	44 U	44 U	44 U	44 U
Benzo(a)anthracene	7.8 U	7.8 U	7.8 U	7.8 U
Benzo(a)pyrene	2.5 U	2.5 U	2.5 U	2.5 U
Benzo(b)fluoranthene	4.8 U	4.8 U	4.8 U	4.8 U
Benzo(ghi)perylene	4.1 U	4.1 U	4.1 U	4.1 U
Benzo(k)fluoranthene	2.5 U	2.5 U	2.5 U	2.5 U
Bis(2-chloroethoxy) methane	5.3 U	5.3 U	5.3 U	5.3 U

Notes:
U - Compound was analyzed for, but not detected.
J - Estimated value.
RE - Sample was reanalyzed by the laboratory.

Table 6
Summary of Analytical Results - Operable Unit 1 Refuse/Fill Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	W-4G	W-6G	W-10G RE	W-13G
Lab Sample Number	A2B43904	A2B48902	A2B24001RE	A2B43902
Sampling Date	11/15/2002	11/18/2002	11/12/2002	11/15/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Semivolatile Organic Compounds (ug/L)				
Bis(2-chloroethyl) ether	5.7 U	5.7 U	5.7 U	5.7 U
Bis(2-ethylhexyl) phthalate	2.5	3.4	0.88 J	1.5
Butyl benzyl phthalate	2.5 U	2.5 U	2.5 U	2.5 U
Chrysene	2.5 U	2.5 U	2.5 U	2.5 U
Cresol, 4,6-Dinitro-O-	24 U	24 U	24 U	24 U
Cresol, p-Chloro-m-	24	3.0 U	3.0 U	3.0 U
Dibenzo(a,h)anthracene	2.5 U	2.5 U	2.5 U	2.5 U
Diethyl phthalate	1.9 U	1.9 U	0.38 J	1.9 U
Dimethyl phthalate	1.8 U	1.8 U	1.6 U	1.6 U
Di-n-butyl phthalate	2.5 U	2.5 U	2.5 U	0.41 BJ
Di-n-octyl phthalate	2.5 U	2.5 U	1.1 BJ	0.37 J
Fluoranthene	2.2 U	2.2 U	2.2 U	2.2 U
Fluorene	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobutadiene	1.8 U	1.8 U	0.90 U	0.90 U
Hexachlorocyclopentadiene	1.8 U	1.8 U	1.0 U	1.0 U
Hexachloroethane	1.8 U	1.8 U	1.6 U	1.6 U
Indeno(1,2,3-cd)pyrene	3.7 U	3.7 U	3.7 U	3.7 U
Isophorone	2.2 U	2.2 U	2.2 U	2.2 U
Naphthalene	20	59	1.6 U	4.3
Nitrobenzene	1.9 U	1.9 U	1.9 U	1.9 U
N-Nitrosodimethylamine	2.2 U	2.2 U	2.2 U	2.2 U
N-Nitroso-Di-n-propylamine	3.3 U	3.3 U	3.3 U	3.3 U
N-nitrosodiphenylamine	1.3 J	13	1.9 U	7.7
Pentachlorophenol	3.6 U	3.6 U	3.6 U	3.6 U
Phenanthrene	2.2 J	5.4 U	5.4 U	5.4 U
Phenol	1.8 U	1.8 U	1.5 U	1.1 J
Pyrene	1.9 U	1.9 U	1.9 U	1.9 U

Notes:
U - Compound was analyzed for, but not detected.
J - Estimated value.
B - Analyte was found in associated blank, as well as the sample.
RE - Sample was reanalyzed by the laboratory.

Table 6
Summary of Analytical Results - Operable Unit 1 Refuse/Fill Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	W-4G	W-6G	W-10G	W-13G
Lab Sample Number	A2B43904	A2B48902	A2B40102	A2B43902
Sampling Date	11/15/2002	11/18/2002	11/14/2002	11/15/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Pesticides/PCBs (ug/L)				
4,4'-DDD	0.038 U	0.020 U	0.0050 U	0.038 U
4,4'-DDE	0.038 U	0.020 U	0.0050 U	0.038 U
4,4'-DDT	0.038 U	0.020 U	0.0050 U	0.038 U
Aldrin	0.038 U	0.020 U	0.0050 U	0.038 U
alpha-BHC	0.038 U	0.020 U	0.0050 U	0.038 U
beta-BHC	0.050 U	0.050 U	0.050 U	0.050 U
Chlordane	0.038 U	0.020 U	0.012	0.038 U
delta-BHC	0.038 U	0.020 U	0.0050 U	0.038 U
Dieldrin	0.038 U	0.020 U	0.0050 U	0.038 U
Endosulfan I	0.038 U	0.020 U	0.0050 U	0.038 U
Endosulfan II	0.038 U	0.020 U	0.0050 U	0.038 U
Endosulfan Sulfate	0.038 U	0.020 U	0.022	0.038 U
Endrin	0.038 U	0.020 U	0.0050 U	0.038 U
Endrin aldehyde	0.038 U	0.020 U	0.0050 U	0.038 U
gamma-BHC (Lindane)	0.038 U	0.020 U	0.013	0.038 U
Heptachlor	0.038 U	0.098	0.0026 J	0.038 U
Heptachlor epoxide	0.038 U	0.080	0.0050 U	0.060
Methoxychlor	0.96 U	0.50 U	0.052 U	0.94 U
PCB 1016	0.96 U	0.50 U	0.052 U	0.94 U
PCB 1221	0.96 U	0.50 U	0.052 U	0.94 U
PCB 1232	0.96 U	0.50 U	0.052 U	0.94 U
PCB 1242	0.96 U	0.50 U	0.052 U	0.94 U
PCB 1248	0.96 U	0.50 U	0.052 U	0.94 U
PCB 1254	0.96 U	0.50 U	0.052 U	0.94 U
PCB 1260	0.19 U	0.10 U	0.10 U	0.19 U
Toxaphene				

Notes:
PCBs - Polychlorinated biphenyls
U - Compound was analyzed for, but not detected.
J - Estimated value.

Table 6
Summary of Analytical Results - Operable Unit 1 Refuse/Fill Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	W-4G	W-6G	W-10G	W-13G	W-13G RE
Lab Sample Number	A2B43904	A2B48902	A2B40102	A2B43902	A2B43902RE
Sampling Date	11/15/2002	11/18/2002	*	11/15/2002	11/15/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Metals (mg/L)					
Antimony, Dissolved	0.10 U	0.10 U	0.10 U	0.10 U	NR
Arsenic, Dissolved	0.0504 B	0.20 U	0.20 U	0.20 U	NR
Barium, Dissolved	0.541	0.68	0.0518	0.484	NR
Beryllium, Dissolved	0.025 U	0.025 U	0.025 U	0.025 U	NR
Cadmium, Dissolved	0.050 U	0.050 U	0.050 U	0.050 U	NR
Lead, Dissolved	0.050 U	0.050 U	0.050 U	0.050 U	NR
Manganese, Dissolved	0.429	0.179	0.948	0.130	NR
Mercury, Dissolved	0.00020 U	0.00020 U	0.00020 U	0.00020 U	NR
Nickel, Dissolved	0.026 B	0.050 U	0.0453 B	0.0318 B	NR
Vanadium, Dissolved	0.030 U	0.030 U	0.030 U	0.030 U	NR
Zinc, Dissolved	0.25 U	0.25 U	0.25 U	0.25 U	NR
General Chemistry (mg/L)					
Biochemical Oxygen Demand (BOD)	35.8	14.2	2.0 U	18.0 E	9.6
Chemical Oxygen Demand (COD)	232	75.0	5.0 U	208	NR
Chloride	347	669	40.8	333	NR
Cyanide, Total	0.010 U	0.010 U	0.010 U	0.010 U	NR
Nitrogen, Nitrate	0.50 U	0.50 U	0.50 U	0.50 U	NR
Phenolics, Total	0.044	0.016	0.0050 U	0.0089	NR
Total Dissolved Solids (TDS)	1920	1420	315	1190	NR
Total Organic Carbon (TOC)	65.3	23.9	1.8	49.6	NR
Total Organic Halogen (TOX) (ug/L)	747	206	21.3	132	NR
Natural Attenuation (ug/L)					
Ethane	80 U	400 U	4.0 U	160 U	NR
Ethene	60 U	300 U	3.0 U	120 U	NR
Methane	4400	5000	9.6	2900	NR

Notes:

* - Sampling was completed on 11/12/02, 11/15/02, 11/18/02, and 12/5/02.

U - Compound was analyzed for, but not detected.

B - Value is greater than or equal to the instrument detection limit, but less than the quantitation limit.

E - Value is estimated due to the presence of interferences.

NR - Compound was not analyzed.

RE - Sample was reanalyzed by the laboratory.

Table 7
Summary of Analytical Results - Operable Unit 1 Sand and Gravel Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	W-3S	W-3S DL	W-4S	W-4S DL	W-6S
Lab Sample Number	A2B40104	A2B40104DL	A2B40106	A2B40106DL	A2B33201
Sampling Date	11/14/2002	11/14/2002	11/14/2002	11/14/2002	11/13/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Volatile Organic Compounds (ug/L)					
1,1,1-Trichloroethane	19 U	190 U	38 U	76 U	19 U
1,1,2,2-Tetrachloroethane	34 U	340 U	69 U	140 U	34 U
1,1,2-Trichloroethane	25 U	250 U	50 U	100 U	25 U
1,1-Dichloroethane	24 U	240 U	47 U	94 U	24 U
1,1-Dichloroethene	14 U	140 U	28 U	56 U	14 U
1,2-Dichloroethane	25 U	250 U	50 U	100 U	25 U
1,2-Dichloroethene (Total)	25 U	250 U	50 U	100 U	25 U
1,2-Dichloropropane	30 U	300 U	60 U	120 U	30 U
2-Chloroethylvinyl ether	50 U	500 U	100 U	200 U	50 U
Acrolein	2000 U	20000 U	4000 U	8000 U	2000 U
Acrylonitrile	2000 U	20000 U	4000 U	8000 U	2000 U
Benzene	180	220 U	88	88 U	59
Bromoform	24 U	240 U	47 U	94 U	24 U
Bromomethane	50 U	500 U	100 U	200 U	50 U
Carbon Tetrachloride	14 U	140 U	28 U	56 U	14 U
Chlorobenzene	2900 E	2800 D	1800 E	1700 D	170
Chloroethane	50 U	500 U	100 U	200 U	50 U
Chloroform	8 U	80 U	16 U	32 U	8 U
Chloromethane	50 U	500 U	100 U	200 U	50 U
cis-1,3-Dichloropropene	25 U	250 U	50 U	100 U	25 U
Dibromochloromethane	16 U	160 U	31 U	62 U	16 U
Dichlorobromomethane	11 U	110 U	22 U	44 U	11 U
Ethylbenzene	87	360 U	72 U	140 U	36 U
Methylene chloride	18 U	180 U	35 U	70 U	18 U
Tetrachloroethene	20 U	200 U	41 U	82 U	20 U
Toluene	270	300 U	60 U	120 U	30 U
trans-1,3-Dichloropropene	25 U	250 U	50 U	100 U	25 U
Trichloroethene	10 U	95 U	19 U	38 U	10 U
Vinyl chloride	50 U	500 U	100 U	200 U	50 U

Notes:
U - Compound was analyzed for, but not detected.
E - Concentration exceeded the calibration range of the instrument for that specific analysis.
D - Compound analyzed at a secondary dilution factor.

Table 7
Summary of Analytical Results - Operable Unit 1 Sand and Gravel Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	W-8S	W-13S
Lab Sample Number	A2B24004	A2B43903
Sampling Date	11/12/2002	11/15/2002
Matrix	GROUNDWATER	GROUNDWATER
Volatile Organic Compounds (ug/L)		
1,1,1-Trichloroethane	19 U	38 U
1,1,2,2-Tetrachloroethane	34 U	69 U
1,1,2-Trichloroethane	25 U	50 U
1,1-Dichloroethane	24 U	47 U
1,1-Dichloroethene	14 U	28 U
1,2-Dichloroethane	25 U	50 U
1,2-Dichloroethene (Total)	25 U	50 U
1,2-Dichloropropane	30 U	60 U
2-Chloroethylvinyl ether	50 U	100 U
Acrolein	2000 U	4000 U
Acrylonitrile	2000 U	4000 U
Benzene	22 U	44 U
Bromoform	24 U	47 U
Bromomethane	50 U	100 U
Carbon Tetrachloride	14 U	28 U
Chlorobenzene	30 U	60 U
Chloroethane	50 U	100 U
Chloroform	8 U	16 U
Chloromethane	50 U	100 U
cis-1,3-Dichloropropene	25 U	50 U
Dibromochloromethane	16 U	31 U
Dichlorobromomethane	11 U	22 U
Ethylbenzene	36 U	72 U
Methylene chloride	18 U	35 U
Tetrachloroethene	20 U	41 U
Toluene	30 U	60 U
trans-1,3-Dichloropropene	25 U	50 U
Trichloroethene	10 U	19 U
Vinyl chloride	50 U	100 U

Notes:
U - Compound was analyzed for, but not detected.

Table 7
Summary of Analytical Results - Operable Unit 1 Sand and Gravel Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	W-3S	W-4S	W-6S	W-8S	W-13S
Lab Sample Number	A2B40104	A2B40106	A2B33201	A2B24004	A2B43903
Sampling Date	11/14/2002	11/14/2002	11/13/2002	11/12/2002	11/15/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Semivolatile Organic Compounds (ug/L)					
1,2,4-Trichlorobenzene	3.6 U	1.9 U	1.9 U	1.9 U	1.9 U
1,2-Dichlorobenzene	3.6 U	1.9 U	0.26 J	1.9 U	0.54 J
1,2-Diphenylhydrazine	3.6 U	1.8 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3.6 U	1.9 U	1.9 U	1.9 U	1.9 U
1,4-Dichlorobenzene	4.4 U	2.2 J	0.88 J	4.4 U	4.4 U
2,2'-Oxybis(1-Chloropropane)	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
2,4,6-Trichlorophenol	3.6 U	2.7 U	2.7 U	2.7 U	2.7 U
2,4-Dichlorophenol	3.6 U	2.7 U	2.7 U	2.7 U	2.7 U
2,4-Dimethylphenol	31	15	2.7 U	2.7 U	2.7 U
2,4-Dinitrophenol	42 U	42 U	42 U	42 U	42 U
2,4-Dinitrotoluene	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
2,6-Dinitrotoluene	3.6 U	1.9 U	1.9 U	1.9 U	1.9 U
2-Chloronaphthalene	3.6 U	1.9 U	1.9 U	1.9 U	1.9 U
2-Chlorophenol	3.6 U	3.3 U	3.3 U	3.3 U	3.3 U
2-Nitrophenol	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
3,3'-Dichlorobenzidine	16 U	16 U	16 U	16 U	16 U
4-Bromophenyl phenyl ether	3.6 U	1.9 U	1.9 U	1.9 U	1.9 U
4-Chlorophenyl phenyl ether	3.6 U	1.8 U	1.0 U	1.0 U	1.0 U
4-Nitrophenol	3.6 U	2.4 U	2.4 U	2.4 U	2.4 U
Acenaphthene	3.6 U	1.9 U	1.9 U	1.9 U	1.9 U
Acenaphthylene	3.6 U	3.5 U	3.5 U	3.5 U	3.5 U
Anthracene	3.6 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzidine	44 U	44 U	44 U	44 U	44 U
Benzo(a)anthracene	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U
Benzo(a)pyrene	3.6 U	2.5 U	2.5 U	2.5 U	2.5 U
Benzo(b)fluoranthene	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U
Benzo(ghi)perylene	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U
Benzo(k)fluoranthene	3.6 U	2.5 U	2.5 U	2.5 U	2.5 U
Bis(2-chloroethoxy) methane	5.3 U	5.3 U	5.3 U	5.3 U	5.3 U

Notes:
U - Compound was analyzed for, but not detected.
J - Estimated value.

Table 7
Summary of Analytical Results - Operable Unit 1 Sand and Gravel Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	W-3S	W-4S	W-6S	W-8S	W-13S
Lab Sample Number	A2B40104	A2B40106	A2B33201	A2B24004	A2B43903
Sampling Date	11/14/2002	11/14/2002	11/13/2002	11/12/2002	11/15/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Semivolatile Organic Compounds (ug/L)					
Bis(2-chloroethyl) ether	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
Bis(2-ethylhexyl) phthalate	3.6 U	1.8 U	0.90 U	0.48 J	0.90 U
Butyl benzyl phthalate	3.6 U	2.5 U	2.5 U	2.5 U	2.5 U
Chrysene	3.6 U	2.5 U	2.5 U	2.5 U	2.5 U
Cresol, 4,6-Dinitro-O-	24 U	24 U	24 U	24 U	24 U
Cresol, p-Chloro-m-	33	3.0 U	3.0 U	3.0 U	3.0 U
Dibenzo(a,h)anthracene	3.6 U	2.5 U	2.5 U	2.5 U	2.5 U
Diethyl phthalate	3.6 U	1.9 U	0.56 J	1.9 U	1.9 U
Dimethyl phthalate	3.6 U	1.8 U	1.6 U	1.6 U	1.6 U
Di-n-butyl phthalate	4.2 B	2.2 BJ	2.5 U	2.5 U	2.5 U
Di-n-octyl phthalate	3.6 U	2.5 U	0.78 BJ	2.5 U	2.5 U
Fluoranthene	3.6 U	2.2 U	2.2 U	2.2 U	2.2 U
Fluorene	3.6 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobenzene	3.6 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobutadiene	3.6 U	1.8 U	0.90 U	0.90 U	0.90 U
Hexachlorocyclopentadiene	3.6 U	1.8 U	1.0 U	1.0 U	1.0 U
Hexachloroethane	3.6 U	1.8 U	1.6 U	1.6 U	1.6 U
Indeno(1,2,3-cd)pyrene	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U
Isophorone	3.6 U	2.2 U	2.2 U	2.2 U	2.2 U
Naphthalene	6.4	4.1	5.2	1.6 U	1.6 U
Nitrobenzene	11	1.9 U	1.9 U	1.9 U	1.9 U
N-Nitrosodimethylamine	3.6 U	2.2 U	2.2 U	2.2 U	2.2 U
N-Nitroso-Di-n-propylamine	3.6 U	3.3 U	3.3 U	3.3 U	3.3 U
N-nitrosodiphenylamine	3.6 U	1.9 U	1.9	1.9 U	1.9 U
Pentachlorophenol	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
Phenanthrene	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U
Phenol	3.6 U	1.8 U	0.42 J	1.5 U	1.5 U
Pyrene	3.6 U	1.9 U	1.9 U	1.9 U	1.9 U

Notes:
U - Compound was analyzed for, but not detected.
J - Estimated value.
B - Analyte was found in associated blank, as well as the sample.

Table 7
Summary of Analytical Results - Operable Unit 1 Sand and Gravel Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	W-3S	W-4S	W-6S	W-8S	W-13S
Lab Sample Number	A2B40104	A2B40106	A2B33201	A2B24004	A2B43903
Sampling Date	11/14/2002	11/14/2002	11/13/2002	11/12/2002	11/15/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Pesticides/PCBs (ug/L)					
4,4'-DDD	2.0 U	0.19 U	0.0080 U	0.0050 U	0.0050 U
4,4'-DDE	2.0 U	0.19 U	0.0080 U	0.0050 U	0.0050 U
4,4'-DDT	2.0 U	0.19 U	0.0080 U	0.0050 U	0.0050 U
Aldrin	2.0 U	0.19 U	0.0080 U	0.0050 U	0.0050 U
alpha-BHC	2.0 U	0.19 U	0.0080 U	0.0050 U	0.0050 U
beta-BHC	2.0 U	0.19 U	0.0080 U	0.0050 U	0.0050 U
Chlordane	2.0 U	0.19 U	0.050 U	0.050 U	0.050 U
delta-BHC	2.0 U	0.19 U	0.0080 U	0.0050 U	0.0050 U
Dieldrin	2.0 U	0.19 U	0.0080 U	0.0050 U	0.0050 U
Endosulfan I	2.0 U	0.19 U	0.0080 U	0.0050 U	0.0050 U
Endosulfan II	2.0 U	0.19 U	0.0080 U	0.0050 U	0.0050 U
Endosulfan Sulfate	2.0 U	0.19 U	0.0080 U	0.0050 U	0.0050 U
Endrin	2.0 U	0.19 U	0.0080 U	0.0050 U	0.0050 U
Endrin aldehyde	2.0 U	0.19 U	0.0080 U	0.0050 U	0.0050 U
gamma-BHC (Lindane)	2.0 U	0.19 U	0.0080 U	0.0050 U	0.0050 U
Heptachlor	2.0 U	0.19 U	0.0080 U	0.0050 U	0.0050 U
Heptachlor epoxide	2.0 U	0.19 U	0.0080 U	0.0050 U	0.0050 U
Methoxychlor	50 U	4.7 U	0.20 U	0.050 U	0.050 U
PCB 1016	50 U	4.7 U	0.20 U	0.050 U	0.050 U
PCB 1221	50 U	4.7 U	0.20 U	0.050 U	0.050 U
PCB 1232	50 U	4.7 U	0.20 U	0.050 U	0.050 U
PCB 1242	50 U	4.7 U	0.20 U	0.050 U	0.050 U
PCB 1248	50 U	4.7 U	0.20 U	0.050 U	0.050 U
PCB 1254	50 U	4.7 U	0.20 U	0.050 U	0.050 U
PCB 1260	10 U	0.95 U	0.10 U	0.10 U	0.10 U
Toxaphene					

Notes:
PCBs - Polychlorinated biphenyls
U - Compound was analyzed for, but not detected.

Table 7
Summary of Analytical Results - Operable Unit 1 Sand and Gravel Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	W-3S	W-3S RE	W-4S	W-4S RE	W-6S
Lab Sample Number	A2B40104	A2B40104RE	A2B40106	A2B40106RE	A2B33201
Sampling Date	11/14/2002	11/14/2002	11/14/2002	11/14/2002	11/13/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Metals (mg/L)					
Antimony, Dissolved	0.10 U	NR	0.10 U	NR	0.1 U
Arsenic, Dissolved	0.0802 B	NR	0.20 U	NR	0.2 U
Barium, Dissolved	0.673	NR	0.446	NR	1.02
Beryllium, Dissolved	0.025 U	NR	0.025 U	NR	0.025 U
Cadmium, Dissolved	0.050 U	NR	0.050 U	NR	0.05 U
Lead, Dissolved	0.050 U	NR	0.050 U	NR	0.05 U
Manganese, Dissolved	3.2	NR	3.78	NR	1.13
Mercury, Dissolved	0.00020 U	NR	0.00020 U	NR	0.00020 U
Nickel, Dissolved	0.0238 B	NR	0.0141 B	NR	0.0097 B
Vanadium, Dissolved	0.030 U	NR	0.030 U	NR	0.03 U
Zinc, Dissolved	0.25 U	NR	0.25 U	NR	0.25 U
General Chemistry (mg/L)					
Biochemical Oxygen Demand (BOD)	29.9	NR	20.9	NR	5.4
Chemical Oxygen Demand (COD)	630	NR	387	NR	243
Chloride	1890	NR	1580	NR	5420
Cyanide, Total	0.010 U	NR	0.010 U	NR	0.010 U
Nitrogen, Nitrate	0.50 U	NR	0.50 U	NR	0.50 U
Phenolics, Total	0.41	NR	0.090	NR	0.0050 U
Total Dissolved Solids (TDS)	3760	3670	3730	3750	63500
Total Organic Carbon (TOC)	146	NR	79.3	NR	31.3
Total Organic Halogen (TOX) (ug/L)	6880	NR	3010	NR	410
Natural Attenuation (ug/L)					
Ethane	80 U	NR	170	NR	80 U
Ethene	60 U	NR	60 U	NR	60 U
Methane	7300	NR	4800	NR	2600

Notes:
U - Compound was analyzed for, but not detected.
B - Value is greater than or equal to the instrument detection limit, but less than the quantitation limit.
NR - Compound was not analyzed.
RE - Sample was reanalyzed by the laboratory.

Table 7
Summary of Analytical Results - Operable Unit 1 Sand and Gravel Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID Lab Sample Number Sampling Date Matrix	W-6S RE A2B33201RE 11/13/2002 GROUNDWATER	W-6S RERE A2B33201RA 11/13/2002 GROUNDWATER	W-8S A2B24004 11/12/2002 GROUNDWATER	W-13S A2B43903 11/15/2002 GROUNDWATER
Metals (mg/L)				
Antimony, Dissolved	NR	NR	0.10 U	0.10 U
Arsenic, Dissolved	NR	NR	0.2 U	0.20 U
Barium, Dissolved	NR	NR	1.1	0.439
Beryllium, Dissolved	NR	NR	0.025 U	0.025 U
Cadmium, Dissolved	NR	NR	0.05 U	0.050 U
Lead, Dissolved	NR	NR	0.05 U	0.050 U
Manganese, Dissolved	NR	NR	1.3	2.28
Mercury, Dissolved	NR	NR	0.00020 U	0.00020 U
Nickel, Dissolved	NR	NR	0.05 U	0.050 U
Vanadium, Dissolved	NR	NR	0.03 U	0.030 U
Zinc, Dissolved	NR	NR	0.25 U	0.25 U
General Chemistry (mg/L)				
Biochemical Oxygen Demand (BOD)	NR	NR	2.0 U	6.3
Chemical Oxygen Demand (COD)	NR	NR	296	114
Chloride	NR	NR	7500	6600
Cyanide, Total	NR	NR	0.010 U	0.010 U
Nitrogen, Nitrate	NR	NR	0.50 U	0.50 U
Phenolics, Total	NR	NR	0.0050 U	0.0050 U
Total Dissolved Solids (TDS)	5770	8080	11700	13400
Total Organic Carbon (TOC)	NR	NR	7.4	14.6
Total Organic Halogen (TOX) (ug/L)	NR	NR	179	142
Natural Attenuation (ug/L)				
Ethane	NR	NR	4.0 U	12 U
Ethene	NR	NR	3.0 U	9.0 U
Methane	NR	NR	36	620

Notes:
U - Compound was analyzed for, but not detected.
NR - Compound was not analyzed.
RE - Sample was reanalyzed by the laboratory.

Table 8
Summary of Analytical Results - Operable Unit 1 Bedrock Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	W-1R	W-2R	W-3RR	DUP-01	W-4R
Lab Sample Number	A2B16001	A2B16002	A2B40103	A2B40101	A2B40105
Sampling Date	11/11/02	11/11/02	11/14/02	11/14/2002	11/14/02
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Volatile Organic Compounds (ug/L)					
1,1,1-Trichloroethane	19000 U	19000 U	4 U	4 U	4 U
1,1,2,2-Tetrachloroethane	34000 U	34000 U	7 U	7 U	7 U
1,1,2-Trichloroethane	25000 U	25000 U	5 U	5 U	5 U
1,1-Dichloroethane	24000 U	24000 U	5 U	5 U	5 U
1,1-Dichloroethene	14000 U	14000 U	3 U	3 U	3 U
1,2-Dichloroethane	25000 U	25000 U	5 U	5 U	5 U
1,2-Dichloroethene (Total)	25000 U	25000 U	5 U	5 U	5 U
1,2-Dichloropropane	30000 U	30000 U	6 U	6 U	6 U
2-Chloroethylvinyl ether	50000 U	50000 U	10 U	10 U	10 U
Acrolein	2000000 U	2000000 U	400 U	400 U	400 U
Acrylonitrile	2000000 U	2000000 U	400 U	400 U	400 U
Benzene	22000 U	22000 U	4 U	4 U	4 U
Bromoform	24000 U	24000 U	5 U	5 U	5 U
Bromomethane	50000 U	50000 U	10 U	10 U	10 U
Carbon Tetrachloride	14000 U	14000 U	3 U	3 U	3 U
Chlorobenzene	30000 U	30000 U	12	12	6
Chloroethane	50000 U	50000 U	10 U	10 U	10 U
Chloroform	8000 U	8000 U	2 U	2 U	2 U
Chloromethane	50000 U	50000 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	25000 U	25000 U	5 U	5 U	5 U
Dibromochloromethane	16000 U	16000 U	3 U	3 U	3 U
Dichlorobromomethane	11000 U	11000 U	2 U	2 U	2 U
Ethylbenzene	36000 U	36000 U	7 U	7 U	7 U
Methylene chloride	400000	290000	4 U	4 U	4 U
Tetrachloroethene	20000 U	20000 U	4 U	4 U	4 U
Toluene	30000 U	30000 U	6 U	6 U	6 U
trans-1,3-Dichloropropene	25000 U	25000 U	5 U	5 U	5 U
Trichloroethene	9500 U	9500 U	2 U	2 U	2 U
Vinyl chloride	50000 U	50000 U	10 U	10 U	10 U

Notes:
U - Compound was analyzed for, but not detected.
DUP-01 is a blind duplicate sample of W-3RR.

Table 8
Summary of Analytical Results - Operable Unit 1 Bedrock Monitoring Wells
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Kin-Buc Landfill
Edison, New Jersey

Sample ID	W-5R	W-6R	W-7R	W-8RR	W-9R
Lab Sample Number	A2B40107	A2B33206	A2B33202	A2B24003	A2B24005
Sampling Date	11/14/02	11/13/02	11/13/02	11/12/02	11/12/02
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Volatile Organic Compounds (ug/L)					
1,1,1-Trichloroethane	38 U	38 U	4 U	4 U	4 U
1,1,2,2-Tetrachloroethane	69 U	69 U	7 U	7 U	7 U
1,1,2-Trichloroethane	50 U	50 U	5 U	5 U	5 U
1,1-Dichloroethane	47 U	47 U	5 U	5 U	5 U
1,1-Dichloroethene	28 U	28 U	3 U	3 U	3 U
1,2-Dichloroethane	50 U	50 U	5 U	5 U	5 U
1,2-Dichloroethene (Total)	50 U	50 U	5 U	5 U	5 U
1,2-Dichloropropane	60 U	60 U	6 U	6 U	6 U
2-Chloroethylvinyl ether	100 U	100 U	10 U	10 U	10 U
Acrolein	4000 U	4000 U	400 U	400 U	400 U
Acrylonitrile	4000 U	4000 U	400 U	400 U	400 U
Benzene	44 U	180	4 U	4 U	4 U
Bromoform	47 U	47 U	5 U	5 U	5 U
Bromomethane	100 U	100 U	10 U	10 U	10 U
Carbon Tetrachloride	28 U	28 U	3 U	3 U	3 U
Chlorobenzene	60 U	60 U	6	6 U	6 U
Chloroethane	100 U	100 U	10 U	10 U	10 U
Chloroform	16 U	16 U	2 U	2 U	2 U
Chloromethane	100 U	100 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	50 U	50 U	5 U	5 U	5 U
Dibromochloromethane	31 U	31 U	3 U	3 U	3 U
Dichlorobromomethane	22 U	22 U	2 U	2 U	2 U
Ethylbenzene	72 U	72 U	7 U	7 U	7 U
Methylene chloride	35 U	35 U	4 U	4 U	4 U
Tetrachloroethene	41 U	41 U	4 U	4 U	4 U
Toluene	60 U	60 U	6 U	6 U	6 U
trans-1,3-Dichloropropene	50 U	50 U	5 U	5 U	5 U
Trichloroethene	19 U	19 U	2 U	2 U	2 U
Vinyl chloride	100 U	100 U	10 U	10 U	10 U

Notes:
U - Compound was analyzed for, but not detected.

Table 8
Summary of Analytical Results - Operable Unit 1 Bedrock Monitoring Wells
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Kin-Buc Landfill
Edison, New Jersey

Sample ID	W-10R
Lab Sample Number	A2B24002
Sampling Date	11/12/02
Matrix	GROUNDWATER
Volatile Organic Compounds (ug/L)	
1,1,1-Trichloroethane	4 U
1,1,2,2-Tetrachloroethane	7 U
1,1,2-Trichloroethane	5 U
1,1-Dichloroethane	5 U
1,1-Dichloroethene	3 U
1,2-Dichloroethane	5 U
1,2-Dichloroethene (Total)	5 U
1,2-Dichloropropane	6 U
2-Chloroethylvinyl ether	10 U
Acrolein	400 U
Acrylonitrile	400 U
Benzene	4 U
Bromoform	5 U
Bromomethane	10 U
Carbon Tetrachloride	3 U
Chlorobenzene	6 U
Chloroethane	10 U
Chloroform	2 U
Chloromethane	10 U
cis-1,3-Dichloropropene	5 U
Dibromochloromethane	3 U
Dichlorobromomethane	2 U
Ethylbenzene	7 U
Methylene chloride	4 U
Tetrachloroethene	4 U
Toluene	6 U
trans-1,3-Dichloropropene	5 U
Trichloroethene	2 U
Vinyl chloride	10 U

Notes:
U - Compound was analyzed for, but not detected.

Table 8
Summary of Analytical Results - Operable Unit 1 Bedrock Monitoring Wells
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Kin-Buc Landfill
Edison, New Jersey

Sample ID	W-1R	W-1R DL	W-2R	W-2R DL	W-3RR
Lab Sample Number	A2B16001	A2B16001DL	A2B16002	A2B16002DL	A2B40103
Sampling Date	11/11/02	11/11/02	11/11/02	11/11/02	11/14/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Semivolatile Organic Compounds (ug/L)					
1,2,4-Trichlorobenzene	360 U	720 U	36 U	360 U	1.9 U
1,2-Dichlorobenzene	360 U	720 U	36 U	360 U	1.9 U
1,2-Diphenylhydrazine	360 U	720 U	36 U	360 U	1.0 U
1,3-Dichlorobenzene	360 U	720 U	36 U	360 U	1.9 U
1,4-Dichlorobenzene	360 U	720 U	36 U	360 U	4.4 U
2,2'-Oxybis(1-Chloropropane)	360 U	720 U	36 U	360 U	5.7 U
2,4,6-Trichlorophenol	360 U	720 U	36 U	360 U	2.7 U
2,4-Dichlorophenol	240 J	720 U	36 U	360 U	2.7 U
2,4-Dimethylphenol	360 U	720 U	470	360 U	0.86 J
2,4-Dinitrophenol	360 U	720 U	42 U	360 U	42 U
2,4-Dinitrotoluene	360 U	720 U	36 U	360 U	5.7 U
2,6-Dinitrotoluene	360 U	720 U	36 U	360 U	1.9 U
2-Chloronaphthalene	360 U	720 U	36 U	360 U	1.9 U
2-Chlorophenol	360 U	720 U	36 U	360 U	3.3 U
2-Nitrophenol	360 U	720 U	36 U	360 U	3.6 U
3,3'-Dichlorobenzidine	360 U	720 U	36 U	360 U	16 U
4-Bromophenyl phenyl ether	360 U	720 U	36 U	360 U	1.9 U
4-Chlorophenyl phenyl ether	360 U	720 U	36 U	360 U	1.0 U
4-Nitrophenol	360 U	720 U	36 U	360 U	2.4 U
Acenaphthene	360 U	720 U	36 U	360 U	1.9 U
Acenaphthylene	360 U	720 U	36 U	360 U	3.5 U
Anthracene	360 U	720 U	36 U	360 U	1.9 U
Benzidine	360 U	720 U	44 U	360 U	44 U
Benzo(a)anthracene	360 U	720 U	36 U	360 U	7.8 U
Benzo(a)pyrene	360 U	720 U	36 U	360 U	2.5 U
Benzo(b)fluoranthene	360 U	720 U	36 U	360 U	4.8 U
Benzo(ghi)perylene	360 U	720 U	36 U	360 U	4.1 U
Benzo(k)fluoranthene	360 U	720 U	36 U	360 U	2.5 U
Bis(2-chloroethoxy) methane	360 U	720 U	36 U	360 U	5.3 U

Notes:
U - Compound was analyzed for, but not detected.
J - Estimated value.

Table 8
Summary of Analytical Results - Operable Unit 1 Bedrock Monitoring Wells
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Kin-Buc Landfill
Edison, New Jersey

Sample ID Lab Sample Number Sampling Date Matrix	W-1R A2B16001 11/11/02 GROUNDWATER	W-1R DL A2B16001DL 11/11/02 GROUNDWATER	W-2R A2B16002 11/11/02 GROUNDWATER	W-2R DL A2B16002DL 11/11/02 GROUNDWATER	W-3RR A2B40103 11/14/2002 GROUNDWATER
Semivolatile Organic Compounds (ug/L)					
Bis(2-chloroethyl) ether	360 U	720 U	36 U	360 U	5.7 U
Bis(2-ethylhexyl) phthalate	360 U	720 U	36 U	360 U	0.90 U
Butyl benzyl phthalate	360 U	720 U	36 U	360 U	2.5 U
Chrysene	360 U	720 U	36 U	360 U	2.5 U
Cresol, 4,6-Dinitro-O-	360 U	720 U	36 U	360 U	24 U
Cresol, p-Chloro-m-	360 U	720 U	36 U	360 U	2.6 J
Dibenzo(a,h)anthracene	360 U	720 U	36 U	360 U	2.5 U
Diethyl phthalate	360 U	720 U	36 U	360 U	1.9 U
Dimethyl phthalate	360 U	720 U	36 U	360 U	1.6 U
Di-n-butyl phthalate	360 U	720 U	36 U	360 U	2.5 U
Di-n-octyl phthalate	360 U	720 U	36 U	360 U	0.38 BJ
Fluoranthene	360 U	720 U	36 U	360 U	2.2 U
Fluorene	360 U	720 U	36 U	360 U	1.9 U
Hexachlorobenzene	360 U	720 U	36 U	360 U	1.9 U
Hexachlorobutadiene	360 U	720 U	36 U	360 U	0.90 U
Hexachlorocyclopentadiene	360 U	720 U	36 U	360 U	1.0 U
Hexachloroethane	360 U	720 U	36 U	360 U	1.6 U
Indeno(1,2,3-cd)pyrene	360 U	720 U	36 U	360 U	3.7 U
Isophorone	360 U	720 U	36 U	360 U	2.2 U
Naphthalene	360 U	720 U	36 U	360 U	1.6 U
Nitrobenzene	360 U	720 U	36 U	360 U	1.9 U
N-Nitrosodimethylamine	360 U	720 U	36 U	360 U	2.2 U
N-Nitroso-Di-n-propylamine	360 U	720 U	36 U	360 U	3.3 U
N-nitrosodiphenylamine	360 U	720 U	36 U	360 U	1.9 U
Pentachlorophenol	360 U	720 U	36 U	360 U	3.6 U
Phenanthrene	79000 BE	78000 BD	46000 BE	51000 BD	5.4 U
Phenol	360 U	720 U	36 U	360 U	1.5 U
Pyrene					1.9 U

Notes:
U - Compound was analyzed for, but not detected.
J - Estimated value.
B - Analyte was found in associated blank, as well as the sample.
D - Compound analyzed at a secondary dilution factor.
E - Concentration exceeded the calibration range of the instrument for that specific analysis.

Table 8
Summary of Analytical Results - Operable Unit 1 Bedrock Monitoring Wells
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Kin-Buc Landfill
Edison, New Jersey

Sample ID	DUP-01	W-4R	W-5R	W-6R	W-7R
Lab Sample Number	A2B40101	A2B40105	A2B40107	A2B48903	A2B33202
Sampling Date	11/14/2002	11/14/2002	11/14/2002	11/18/2002	11/13/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Semivolatile Organic Compounds (ug/L)					
1,2,4-Trichlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
1,2-Dichlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
1,2-Diphenylhydrazine	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
1,4-Dichlorobenzene	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U
2,2'-Oxybis(1-Chloropropane)	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
2,4,6-Trichlorophenol	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
2,4-Dichlorophenol	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
2,4-Dimethylphenol	0.28 J	2.7 U	2.7 U	4.4	2.7 U
2,4-Dinitrophenol	42 U	42 U	42 U	42 U	42 U
2,4-Dinitrotoluene	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
2,6-Dinitrotoluene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2-Chloronaphthalene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2-Chlorophenol	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
2-Nitrophenol	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
3,3'-Dichlorobenzidine	16 U	16 U	16 U	16 U	16 U
4-Bromophenyl phenyl ether	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
4-Chlorophenyl phenyl ether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Nitrophenol	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
Acenaphthene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Acenaphthylene	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
Anthracene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzidine	44 U	44 U	44 U	44 U	44 U
Benzo(a)anthracene	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U
Benzo(a)pyrene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Benzo(b)fluoranthene	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U
Benzo(ghi)perylene	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U
Benzo(k)fluoranthene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Bis(2-chloroethoxy) methane	5.3 U	5.3 U	5.3 U	5.3 U	5.3 U

Notes:
U - Compound was analyzed for, but not detected.
J - Estimated value.
DUP-01 is a blind duplicate sample of W-3RR.

Table 8
Summary of Analytical Results - Operable Unit 1 Bedrock Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	DUP-01	W-4R	W-5R	W-6R	W-7R
Lab Sample Number	A2B40101	A2B40105	A2B40107	A2B48903	A2B33202
Sampling Date	11/14/2002	11/14/2002	11/14/2002	11/18/2002	11/13/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Semivolatile Organic Compounds (ug/L)					
Bis(2-chloroethyl) ether	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
Bis(2-ethylhexyl) phthalate	0.90 U	0.89 J	0.90 U	0.90 U	0.90 U
Butyl benzyl phthalate	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Chrysene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Cresol, 4,6-Dinitro-O-	24 U	24 U	24 U	24 U	24 U
Cresol, p-Chloro-m-	1.3 J	11	3.0 U	3.0 U	3.0 U
Dibenzo(a,h)anthracene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Diethyl phthalate	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Dimethyl phthalate	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Di-n-butyl phthalate	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Di-n-octyl phthalate	0.54 BJ	2.5 U	0.28 BJ	0.59 BJ	0.46 BJ
Fluoranthene	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
Fluorene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobutadiene	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U
Hexachlorocyclopentadiene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloroethane	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Indeno(1,2,3-cd)pyrene	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U
Isophorone	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
Naphthalene	1.6 U	1.6 U	1.6 U	0.42 J	1.6 U
Nitrobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
N-Nitrosodimethylamine	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
N-Nitroso-Di-n-propylamine	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
N-nitrosodiphenylamine	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Pentachlorophenol	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
Phenanthrene	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U
Phenol	1.5 U	1.5 U	1.5 U	5.0	1.5 U
Pyrene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U

Notes:
U - Compound was analyzed for, but not detected.
J - Estimated value.
B - Analyte was found in associated blank, as well as the sample.
DUP-01 is a blind duplicate sample of W-3RR.

Table 8
Summary of Analytical Results - Operable Unit 1 Bedrock Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	W-8RR	W-9R	W-10R
Lab Sample Number	A2B24003	A2B24005	A2B24002
Sampling Date	11/12/2002	11/12/2002	11/12/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER
Semivolatile Organic Compounds (ug/L)			
1,2,4-Trichlorobenzene	1.9 U	1.9 U	1.9 U
1,2-Dichlorobenzene	1.9 U	1.9 U	1.9 U
1,2-Diphenylhydrazine	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	1.9 U	1.9 U	1.9 U
1,4-Dichlorobenzene	4.4 U	4.4 U	4.4 U
2,2'-Oxybis(1-Chloropropane)	5.7 U	5.7 U	5.7 U
2,4,6-Trichlorophenol	2.7 U	2.7 U	2.7 U
2,4-Dichlorophenol	2.7 U	2.7 U	2.7 U
2,4-Dimethylphenol	2.7 U	2.7 U	2.7 U
2,4-Dinitrophenol	42 U	42 U	42 U
2,4-Dinitrotoluene	5.7 U	5.7 U	5.7 U
2,6-Dinitrotoluene	1.9 U	1.9 U	1.9 U
2-Chloronaphthalene	1.9 U	1.9 U	1.9 U
2-Chlorophenol	3.3 U	3.3 U	3.3 U
2-Nitrophenol	3.6 U	3.6 U	3.6 U
3,3'-Dichlorobenzidine	16 U	16 U	16 U
4-Bromophenyl phenyl ether	1.9 U	1.9 U	1.9 U
4-Chlorophenyl phenyl ether	1.0 U	1.0 U	1.0 U
4-Nitrophenol	2.4 U	2.4 U	2.4 U
Acenaphthene	1.9 U	1.9 U	1.9 U
Acenaphthylene	3.5 U	3.5 U	3.5 U
Anthracene	1.9 U	1.9 U	1.9 U
Benzidine	44 U	44 U	44 U
Benzo(a)anthracene	7.8 U	7.8 U	7.8 U
Benzo(a)pyrene	2.5 U	2.5 U	2.5 U
Benzo(b)fluoranthene	4.8 U	4.8 U	4.8 U
Benzo(ghi)perylene	4.1 U	4.1 U	4.1 U
Benzo(k)fluoranthene	2.5 U	2.5 U	2.5 U
Bis(2-chloroethoxy) methane	5.3 U	5.3 U	5.3 U

Notes:
U - Compound was analyzed for, but not detected.

Table 8
Summary of Analytical Results - Operable Unit 1 Bedrock Monitoring Wells
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Kin-Buc Landfill
Edison, New Jersey

Sample ID Lab Sample Number Sampling Date Matrix	W-8RR A2B24003 11/12/2002 GROUNDWATER	W-9R A2B24005 11/12/2002 GROUNDWATER	W-10R A2B24002 11/12/2002 GROUNDWATER
Semivolatile Organic Compounds (ug/L)			
Bis(2-chloroethyl) ether	5.7 U	5.7 U	5.7 U
Bis(2-ethylhexyl) phthalate	0.25 J	0.90 U	1.2
Butyl benzyl phthalate	2.5 U	2.5 U	2.5 U
Chrysene	2.5 U	2.5 U	2.5 U
Cresol, 4,6-Dinitro-O-	24 U	24 U	24 U
Cresol, p-Chloro-m-	3.0 U	3.0 U	3.0 U
Dibenzo(a,h)anthracene	2.5 U	2.5 U	2.5 U
Diethyl phthalate	1.9 U	1.9 U	0.38 J
Dimethyl phthalate	1.6 U	1.6 U	1.6 U
Di-n-butyl phthalate	2.5 U	2.5 U	0.31 J
Di-n-octyl phthalate	2.5 U	2.5 U	2.5 U
Fluoranthene	2.2 U	2.2 U	2.2 U
Fluorene	1.9 U	1.9 U	1.9 U
Hexachlorobenzene	1.9 U	1.9 U	1.9 U
Hexachlorobutadiene	0.90 U	0.90 U	0.90 U
Hexachlorocyclopentadiene	1.0 U	1.0 U	1.0 U
Hexachloroethane	1.6 U	1.6 U	1.6 U
Indeno(1,2,3-cd)pyrene	3.7 U	3.7 U	3.7 U
Isophorone	2.2 U	2.2 U	2.2 U
Naphthalene	1.6 U	1.6 U	1.6 U
Nitrobenzene	1.9 U	1.9 U	1.9 U
N-Nitrosodimethylamine	2.2 U	2.2 U	2.2 U
N-Nitroso-Di-n-propylamine	3.3 U	3.3 U	3.3 U
N-nitrosodiphenylamine	1.9 U	1.9 U	1.9 U
Pentachlorophenol	3.6 U	3.6 U	3.6 U
Phenanthrene	5.4 U	5.4 U	5.4 U
Phenol	1.5 U	1.5 U	1.5 U
Pyrene	1.9 U	1.9 U	1.9 U

Notes:
U - Compound was analyzed for, but not detected.
J - Estimated value.

Table 8
Summary of Analytical Results - Operable Unit 1 Bedrock Monitoring Wells
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Sample ID	W-1R RE	W-2R RE	W-3RR	DUP-01	W-4R
Lab Sample Number	A2B16001RE	A2B16002RE	A2B40103	A2B40101	A2B40105
Sampling Date	11/11/02	11/11/02	11/14/02	11/14/2002	11/14/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Pesticides/PCBs (ug/L)					
4,4'-DDD	0.38 U	0.19 U	0.0050 U	0.0050 U	0.0050 U
4,4'-DDE	0.38 U	0.19 U	0.0050 U	0.0050 U	0.0050 U
4,4'-DDT	0.38 U	0.19 U	0.0050 U	0.0050 U	0.0043 J
Aldrin	0.38 U	0.19 U	0.0050 U	0.0050 U	0.0050 U
alpha-BHC	0.38 U	0.19 U	0.0050 U	0.0050 U	0.0050 U
beta-BHC	0.38 U	0.19 U	0.050 U	0.050 U	0.050 U
Chlordane	0.38 U	0.19 U	0.0050 U	0.0029 J	0.0050 U
delta-BHC	0.38 U	0.19 U	0.0049 J	0.0038 J	0.0080
Dieldrin	0.38 U	0.19 U	0.0050 U	0.0050 U	0.0069
Endosulfan I	0.38 U	0.19 U	0.0050 U	0.0050 U	0.0050 U
Endosulfan II	0.38 U	0.19 U	0.0050 U	0.0076	0.014
Endosulfan Sulfate	0.38 U	0.19 U	0.0050 U	0.0050 U	0.0044 J
Endrin	0.38 U	0.19 U	0.0050 U	0.0026 J	0.011
Endrin aldehyde	0.38 U	0.19 U	0.0050 U	0.0038 J	0.0050 U
gamma-BHC (Lindane)	0.38 U	0.19 U	0.0050 U	0.0022 J	0.0050 U
Heptachlor	0.38 U	0.19 U	0.0050 U	0.0050 U	0.0050 U
Heptachlor epoxide	0.38 U	0.19 U	0.0050 U	0.012	0.032
Methoxychlor	9.6 U	4.8 U	0.050 U	0.050 U	0.050 U
PCB 1016	9.6 U	4.8 U	0.050 U	0.050 U	0.050 U
PCB 1221	9.6 U	4.8 U	0.050 U	0.050 U	0.050 U
PCB 1232	9.6 U	4.8 U	0.050 U	0.050 U	0.050 U
PCB 1242	9.6 U	4.8 U	0.050 U	0.050 U	0.050 U
PCB 1248	9.6 U	4.8 U	0.050 U	0.050 U	0.050 U
PCB 1254	9.6 U	4.8 U	0.050 U	0.050 U	0.050 U
PCB 1260	1.9 U	0.96 U	0.10 U	0.10 U	0.10 U
Toxaphene					

Notes:
PCBs - Polychlorinated biphenyls
U - Compound was analyzed for, but not detected.
J - Estimated value.
RE - Sample was reanalyzed by the laboratory.
DUP-01 is a blind duplicate sample of W-3RR.

Table 8
Summary of Analytical Results - Operable Unit 1 Bedrock Monitoring Wells
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Kin-Buc Landfill
Edison, New Jersey

Sample ID Lab Sample Number Sampling Date Matrix	W-5R A2B40107 11/14/2002 GROUNDWATER	W-6R A2B48903 11/18/2002 GROUNDWATER	W-7R A2B33202 11/13/2002 GROUNDWATER	W-8RR RE A2B24003RE 11/12/2002 GROUNDWATER	W-9R RE A2B24005RE 11/12/2002 GROUNDWATER
Pesticides/PCBs (ug/L)					
4,4'-DDD	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
4,4'-DDE	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
4,4'-DDT	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Aldrin	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
alpha-BHC	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.011
beta-BHC	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Chlordane	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
delta-BHC	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Dieldrin	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Endosulfan I	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Endosulfan II	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Endosulfan Sulfate	0.0050 U	0.0050 U	0.0087	0.0050 U	0.0060
Endrin	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Endrin aldehyde	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
gamma-BHC (Lindane)	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Heptachlor	0.0050 U	0.021	0.0050 U	0.050 U	0.050 U
Heptachlor epoxide	0.0064	0.097 U	0.050 U	0.050 U	0.050 U
Methoxychlor	0.050 U	0.097 U	0.050 U	0.050 U	0.050 U
PCB 1016	0.050 U	0.097 U	0.050 U	0.050 U	0.050 U
PCB 1221	0.050 U	0.097 U	0.050 U	0.050 U	0.050 U
PCB 1232	0.050 U	0.097 U	0.050 U	0.050 U	0.050 U
PCB 1242	0.050 U	0.097 U	0.050 U	0.050 U	0.050 U
PCB 1248	0.050 U	0.097 U	0.050 U	0.050 U	0.050 U
PCB 1254	0.050 U	0.097 U	0.050 U	0.050 U	0.050 U
PCB 1260	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Toxaphene					

Notes:
PCBs - Polychlorinated biphenyls
U - Compound was analyzed for, but not detected.
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Table 8
Summary of Analytical Results - Operable Unit 1 Bedrock Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	W-10R
Lab Sample Number	A2B24002
Sampling Date	11/12/2002
Matrix	GROUNDWATER
Pesticides/PCBs (ug/L)	
4,4'-DDD	0.0050 U
4,4'-DDE	0.0050 U
4,4'-DDT	0.0050 U
Aldrin	0.0050 U
alpha-BHC	0.0050 U
beta-BHC	0.050 U
Chlordane	0.0050 U
delta-BHC	0.0050 U
Dieldrin	0.0050 U
Endosulfan I	0.0050 U
Endosulfan II	0.0050 U
Endosulfan Sulfate	0.0050 U
Endrin	0.0050 U
Endrin aldehyde	0.0050 U
gamma-BHC (Lindane)	0.0050 U
Heptachlor	0.0050 U
Heptachlor epoxide	0.0050 U
Methoxychlor	0.050 U
PCB 1016	0.050 U
PCB 1221	0.050 U
PCB 1232	0.050 U
PCB 1242	0.050 U
PCB 1248	0.050 U
PCB 1254	0.050 U
PCB 1260	0.10 U
Toxaphene	

Notes:
PCBs - Polychlorinated biphenyls
U - Compound was analyzed for, but not detected.

Table 8
Summary of Analytical Results - Operable Unit 1 Bedrock Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	W-1R	W-2R	W-3RR	W-3RR RE	DUP-01
Lab Sample Number	A2B16001	A2B16002	A2B40103	A2B40103RE	A2B40101
Sampling Date	11/11/02	11/11/02	11/14/02	11/14/2002	11/14/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Metals (mg/L)					
Antimony, Dissolved	0.5 U	0.5 U	0.10 U	NR	0.10 U
Arsenic, Dissolved	1.0 U	1.0 U	0.20 U	NR	0.20 U
Barium, Dissolved	0.0729 B	0.0973 B	1.35	NR	1.31
Beryllium, Dissolved	0.125 U	0.0351 B	0.025 U	NR	0.025 U
Cadmium, Dissolved	0.250 U	0.250 U	0.050 U	NR	0.050 U
Lead, Dissolved	0.250 U	0.250 U	0.050 U	NR	0.050 U
Manganese, Dissolved	58.5	36.6	2.94	NR	2.860
Mercury, Dissolved	0.00020 U	0.00020 U	0.00020 U	NR	0.00020 U
Nickel, Dissolved	1.38	2.41	0.050 U	NR	0.050 U
Vanadium, Dissolved	0.150 U	0.150 U	0.030 U	NR	0.030 U
Zinc, Dissolved	1.25 U	13.4	0.25 U	NR	0.250 U
General Chemistry (mg/L)					
Biochemical Oxygen Demand (BOD)	9480	5920	6.3	NR	5.1
Chemical Oxygen Demand (COD)	24800	11300	16.2	NR	10 U
Chloride	3680	3140	3250	NR	4600
Cyanide, Total	0.020 U	0.020 U	0.010 U	NR	0.010 U
Nitrogen, Nitrate	0.50 U	0.50 U	0.50 U	NR	0.50 U
Phenolics, Total	204	128	0.013	NR	0.013
Total Dissolved Solids (TDS)	18100	10500	4980	5100	10400
Total Organic Carbon (TOC)	3880	1700	2.8	NR	3.3
Total Organic Halogen (TOX) (ug/L)	292000	138000	371	NR	170
Natural Attenuation (ug/L)					
Ethane	80 U	80 U	20 U	NR	20 U
Ethene	60 U	75	15 U	NR	15 U
Methane	1300	3000	560	NR	580

Notes:
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NR - Compound was not analyzed.
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DUP-01 is a blind duplicate sample of W-3RR.

Table 8
Summary of Analytical Results - Operable Unit 1 Bedrock Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID Lab Sample Number Sampling Date Matrix	DUP-01 RE A2B40101RE 11/14/2002 GROUNDWATER	W-4R A2B40105 11/14/2002 GROUNDWATER	W-4R RE A2B40105RE 11/14/2002 GROUNDWATER	W-5R A2B40107 11/14/2002 GROUNDWATER	W-5R RE A2B40107RE 11/14/2002 GROUNDWATER
Metals (mg/L)					
Antimony, Dissolved	NR	0.10 U	NR	0.10 U	NR
Arsenic, Dissolved	NR	0.20 U	NR	0.20 U	NR
Barium, Dissolved	NR	3.15	NR	0.567	NR
Beryllium, Dissolved	NR	0.025 U	NR	0.025 U	NR
Cadmium, Dissolved	NR	0.050 U	NR	0.050 U	NR
Lead, Dissolved	NR	0.050 U	NR	0.050 U	NR
Manganese, Dissolved	NR	1.94	NR	1.67	NR
Mercury, Dissolved	NR	0.00020 U	NR	0.00020 U	NR
Nickel, Dissolved	NR	0.050 U	NR	0.050 U	NR
Vanadium, Dissolved	NR	0.030 U	NR	0.030 U	NR
Zinc, Dissolved	NR	0.25 U	NR	0.25 U	NR
General Chemistry (mg/L)					
Biochemical Oxygen Demand (BOD)	NR	2.0 U	NR	4.8	NR
Chemical Oxygen Demand (COD)	NR	29.7	NR	134	NR
Chloride	NR	3100	NR	5870	NR
Cyanide, Total	NR	0.010 U	NR	0.010 U	NR
Nitrogen, Nitrate	NR	0.50 U	NR	0.50 U	NR
Phenolics, Total	4600	0.011	NR	0.0050 U	NR
Total Dissolved Solids (TDS)	NR	5350	4770	9250	9870
Total Organic Carbon (TOC)	NR	2.8	NR	17.9	NR
Total Organic Halogen (TOX) (ug/L)		3080	NR	1230	NR
Natural Attenuation (ug/L)					
Ethane	NR	4.0 U	NR	12 U	NR
Ethene	NR	3.0 U	NR	9.0 U	NR
Methane	NR	130	NR	310	NR

Notes:
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instrument detection limit, but less than the quantitation limit.
NR - Compound was not analyzed.
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DUP-01 is a blind duplicate sample of W-3RR.

Table 8
Summary of Analytical Results - Operable Unit 1 Bedrock Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID Lab Sample Number Sampling Date Matrix	W-6R A2B33206 11/18/2002 GROUNDWATER	W-7R A2B33202 11/13/2002 GROUNDWATER	W-7R RE A2B33202RE 11/13/2002 GROUNDWATER	W-7R RERE A2B33202RA 11/13/2002 GROUNDWATER	W-8RR A2B24003 11/12/2002 GROUNDWATER
Metals (mg/L)					
Antimony, Dissolved	0.10 U	0.1 U	NR	NR	0.10 U
Arsenic, Dissolved	0.20 U	0.2 U	NR	NR	0.2 U
Barium, Dissolved	0.316	0.438	NR	NR	0.566
Beryllium, Dissolved	0.025 U	0.025 U	NR	NR	0.025 U
Cadmium, Dissolved	0.050 U	0.050 U	NR	NR	0.05 U
Lead, Dissolved	0.050 U	0.050 U	NR	NR	0.05 U
Manganese, Dissolved	1.02	0.568	NR	NR	0.693
Mercury, Dissolved	0.00020 U	0.00020 U	NR	NR	0.00020 U
Nickel, Dissolved	0.050 U	0.050 U	NR	NR	0.05 U
Vanadium, Dissolved	0.030 U	0.030 U	NR	NR	0.03 U
Zinc, Dissolved	0.25 U	0.25 U	NR	NR	0.25 U
General Chemistry (mg/L)					
Biochemical Oxygen Demand (BOD)	23.6	26.4	NR	NR	9.0
Chemical Oxygen Demand (COD)	234	9.0	NR	NR	236
Chloride	5620	2090	NR	NR	8200
Cyanide, Total	0.010 U	0.010 U	NR	NR	0.010 U
Nitrogen, Nitrate	0.50 U	0.50 U	NR	NR	0.50 U
Phenolics, Total	0.028	0.0050 U	NR	4760	0.0050 U
Total Dissolved Solids (TDS)	10700	244	7920	NR	12600
Total Organic Carbon (TOC)	204	19.6	NR	NR	4.7
Total Organic Halogen (TOX) (ug/L)	259	73.7	NR		130
Natural Attenuation (ug/L)					
Ethane	200 U	400 U	NR	NR	80 U
Ethene	150 U	300 U	NR	NR	60 U
Methane	4100	6500	NR	NR	2300

Notes:
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NR - Compound was not analyzed.
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Table 8
Summary of Analytical Results - Operable Unit 1 Bedrock Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID Lab Sample Number Sampling Date Matrix	W-9R A2B24005 11/12/2002 GROUNDWATER	W-10R A2B24002 11/12/2002 GROUNDWATER	W-10R RE A2B24002RE 11/12/2002 GROUNDWATER	W-10R RERE A2B24002RA 11/12/2002 GROUNDWATER
Metals (mg/L)				
Antimony, Dissolved	0.10 U	0.10 U	NR	NR
Arsenic, Dissolved	0.2 U	0.2 U	NR	NR
Barium, Dissolved	0.0984	0.0552	NR	NR
Beryllium, Dissolved	0.025 U	0.025 U	NR	NR
Cadmium, Dissolved	0.05 U	0.05 U	NR	NR
Lead, Dissolved	0.05 U	0.05 U	NR	NR
Manganese, Dissolved	1.44	0.191	NR	NR
Mercury, Dissolved	0.00020 U	0.00020 U	NR	NR
Nickel, Dissolved	0.0157 B	0.05 U	NR	NR
Vanadium, Dissolved	0.03 U	0.03 U	NR	NR
Zinc, Dissolved	0.25 U	0.25 U	NR	NR
General Chemistry (mg/L)				
Biochemical Oxygen Demand (BOD)	10.8	2.0 U	NR	NR
Chemical Oxygen Demand (COD)	11.3	5.0 U	NR	NR
Chloride	249	11.2	NR	NR
Cyanide, Total	0.010 U	0.010 U	NR	NR
Nitrogen, Nitrate	0.50 U	0.50 U	NR	NR
Phenolics, Total	0.0050 U	0.0050 U	NR	NR
Total Dissolved Solids (TDS)	667	185	155	119
Total Organic Carbon (TOC)	2.6	1.0 U	NR	NR
Total Organic Halogen (TOX) (ug/L)	50.8	15.2	NR	NR
Natural Attenuation (ug/L)				
Ethane	40 U	4.0 U	NR	NR
Ethene	30 U	3.0 U	NR	NR
Methane	1600	70	NR	NR

Notes:
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NR - Compound was not analyzed.
RE - Sample was reanalyzed by the laboratory.

Table 9
Summary of Analytical Results - Operable Unit 2 Refuse/Fill Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	GEI-3G	GEI-5G	GEI-6G	GEI-10G	DUP-02
Lab Sample Number	A2B54301	A2B60501	A2B60502	A2B65702	A2B65701
Sampling Date	11/19/2002	11/20/2002	11/20/2002	11/21/2002	11/21/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Volatile Organic Compounds (ug/L)					
1,1,1-Trichloroethane	19 U	38 U	38 U	38 U	38 U
1,1,2,2-Tetrachloroethane	34 U	69 U	69 U	69 U	69 U
1,1,2-Trichloroethane	25 U	50 U	50 U	50 U	50 U
1,1-Dichloroethane	24 U	47 U	47 U	47 U	47 U
1,1-Dichloroethene	14 U	28 U	28 U	28 U	28 U
1,2-Dichloroethane	25 U	50 U	50 U	50 U	50 U
1,2-Dichloroethene (Total)	25 U	50 U	50 U	50 U	50 U
1,2-Dichloropropane	30 U	60 U	60 U	60 U	60 U
2-Chloroethylvinyl ether	50 U	100 U	100 U	100 U	100 U
Acrolein	2000 U	4000 U	4000 U	4000 U	4000 U
Acrylonitrile	2000 U	4000 U	4000 U	4000 U	4000 U
Benzene	22 U	910	44 U	210	210
Bromoform	24 U	47 U	47 U	47 U	47 U
Bromomethane	50 U	100 U	100 U	100 U	100 U
Carbon Tetrachloride	14 U	28 U	28 U	28 U	28 U
Chlorobenzene	30 U	60 U	60 U	240	250
Chloroethane	50 U	100 U	100 U	100 U	100 U
Chloroform	8 U	16 U	16 U	16 U	16 U
Chloromethane	50 U	100 U	100 U	100 U	100 U
cis-1,3-Dichloropropene	25 U	50 U	50 U	50 U	50 U
Dibromochloromethane	16 U	31 U	31 U	31 U	31 U
Dichlorobromomethane	11 U	22 U	22 U	22 U	22 U
Ethylbenzene	36 U	72 U	72 U	72 U	72 U
Methylene chloride	18 U	35 U	35 U	35 U	35 U
Tetrachloroethene	20 U	41 U	41 U	41 U	41 U
Toluene	30 U	60 U	60 U	60 U	60 U
trans-1,3-Dichloropropene	25 U	50 U	50 U	50 U	50 U
Trichloroethene	10 U	19 U	19 U	19 U	19 U
Vinyl chloride	50 U	100 U	100 U	100 U	100 U

Notes:
U - Compound was analyzed for, but not detected.

Table 9
Summary of Analytical Results - Operable Unit 2 Refuse/Fill Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	GEI-3G	GEI-5G	GEI-6G	GEI-10G	DUP-02
Lab Sample Number	A2B54301	A2B60501	A2B60502	A2B65702	A2B65701
Sampling Date	11/19/2002	11/20/2002	11/20/2002	11/21/2002	11/21/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Semivolatile Organic Compounds (ug/L)					
1,2,4-Trichlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
1,2-Dichlorobenzene	0.61 J	2.2	1.9 U	1.2 J	1.1 J
1,2-Diphenylhydrazine	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
1,4-Dichlorobenzene	4.3 J	4.1 J	1.5 J	5.3	4.8
2,2'-Oxybis(1-Chloropropane)	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
2,4,6-Trichlorophenol	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
2,4-Dichlorophenol	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
2,4-Dimethylphenol	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
2,4-Dinitrophenol	42 U	42 U	42 U	42 U	42 U
2,4-Dinitrotoluene	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
2,6-Dinitrotoluene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2-Chloronaphthalene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2-Chlorophenol	3.3 U	3.3 U	3.3 U	3.3 U	0.29 J
2-Nitrophenol	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
3,3'-Dichlorobenzidine	16 U	16 U	16 U	16 U	16 U
4-Bromophenyl phenyl ether	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
4-Chlorophenyl phenyl ether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Nitrophenol	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
Acenaphthene	1.2 J	1.9 U	1.9 U	0.80 J	0.77 J
Acenaphthylene	3.5 U	3.5 U	3.5 U	0.25 J	3.5 U
Anthracene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzidine	44 U	44 U	44 U	44 U	44 U
Benzo(a)anthracene	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U
Benzo(a)pyrene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Benzo(b)fluoranthene	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U
Benzo(ghi)perylene	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U
Benzo(k)fluoranthene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Bis(2-chloroethoxy) methane	5.3 U	5.3 U	5.3 U	5.3 U	5.3 U

Notes:
U - Compound was analyzed for, but not detected.
J - Estimated value.
DUP-02 is a blind duplicate sample of GEI-10G.

Table 9
Summary of Analytical Results - Operable Unit 2 Refuse/Fill Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	GEI-3G	GEI-5G	GEI-6G	GEI-10G	DUP-02
Lab Sample Number	A2B54301	A2B60501	A2B60502	A2B65702	A2B65701
Sampling Date	11/19/2002	11/20/2002	11/20/2002	11/21/2002	11/21/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Semivolatile Organic Compounds (ug/L)					
Bis(2-chloroethyl) ether	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
Bis(2-ethylhexyl) phthalate	0.90 U	2.0 B	1.8 B	0.90 U	0.90 U
Butyl benzyl phthalate	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Chrysene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Cresol, 4,6-Dinitro-O-	24 U	24 U	24 U	24 U	24 U
Cresol, p-Chloro-m-	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Dibenzo(a,h)anthracene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Diethyl phthalate	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Dimethyl phthalate	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Di-n-butyl phthalate	0.57 J	0.84 J	2.5 U	2.5 U	2.5 U
Di-n-octyl phthalate	0.68 BJ	0.73 BJ	1.1 BJ	2.5 U	0.39 J
Fluoranthene	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
Fluorene	0.77 J	1.9 U	1.9 U	0.72 J	0.61 J
Hexachlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobutadiene	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U
Hexachlorocyclopentadiene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloroethane	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Indeno(1,2,3-cd)pyrene	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U
Isophorone	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
Naphthalene	0.59 J	0.82 J	9.3	19 B	9.4 B
Nitrobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
N-Nitrosodimethylamine	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
N-Nitroso-Di-n-propylamine	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
N-nitrosodiphenylamine	6.5	1.9	1.8 J	8.0	8.1
Pentachlorophenol	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
Phenanthrene	5.4 U	5.4 U	5.4 U	0.60 J	0.54 J
Phenol	1.4 J	1.5 U	1.5 U	1.4 J	1.8
Pyrene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U

Notes:
U - Compound was analyzed for, but not detected.
J - Estimated value.
B - Analyte was found in associated blank, as well as the sample.
DUP-02 is a blind duplicate sample of GEI-10G.

Table 9
Summary of Analytical Results - Operable Unit 2 Refuse/Fill Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	GEI-3G	GEI-5G	GEI-6G	GEI-10G	DUP-02
Lab Sample Number	A2B54301	A2B60501	A2B60502	A2B65702	A2B65701
Sampling Date	11/19/2002	11/20/2002	11/20/2002	11/21/2002	11/21/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Pesticides/PCBs (ug/L)					
4,4'-DDD	0.019 U	0.038 U	0.019 U	0.020 U	0.019 U
4,4'-DDE	0.019 U	0.038 U	0.019 U	0.020 U	0.019 U
4,4'-DDT	0.019 U	0.038 U	0.019 U	0.020 U	0.019 U
Aldrin	0.019 U	0.038 U	0.019 U	0.020 U	0.019 U
alpha-BHC	0.019 U	0.038 U	0.019 U	0.020 U	0.019 U
beta-BHC	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Chlordane	0.019 U	0.18	0.11	0.020 U	0.019 U
delta-BHC	0.019 U	0.038 U	0.019 U	0.020 U	0.019 U
Dieldrin	0.019 U	0.038 U	0.019 U	0.020 U	0.019 U
Endosulfan I	0.019 U	0.038 U	0.051	0.020 U	0.019 U
Endosulfan II	0.019 U	0.038 U	0.019 U	0.020 U	0.019 U
Endosulfan Sulfate	0.019 U	0.038 U	0.019 U	0.020 U	0.019 U
Endrin	0.019 U	0.038 U	0.19	0.020 U	0.019 U
Endrin aldehyde	0.019 U	0.038 U	0.019 U	0.020 U	0.019 U
gamma-BHC (Lindane)	0.019 U	0.038 U	0.019 U	0.020 U	0.019 U
Heptachlor	0.019 U	0.038 U	0.019 U	0.020 U	0.019 U
Heptachlor epoxide	0.019 U	0.18	0.12	0.36	0.34
Methoxychlor	0.47 U	0.95 U	0.48 U	0.50 U	0.47 U
PCB 1016	0.47 U	0.95 U	0.48 U	0.50 U	0.47 U
PCB 1221	0.47 U	0.95 U	0.48 U	0.50 U	0.47 U
PCB 1232	0.47 U	0.95 U	0.48 U	0.50 U	0.47 U
PCB 1242	0.47 U	0.95 U	0.48 U	0.50 U	0.47 U
PCB 1248	0.47 U	0.95 U	0.48 U	0.50 U	0.47 U
PCB 1254	0.47 U	0.95 U	0.48 U	0.50 U	0.47 U
PCB 1260	0.10 U	0.19 U	0.10 U	0.10 U	0.10 U
Toxaphene					

Notes:
PCBs - Polychlorinated biphenyls
U - Compound was analyzed for, but not detected.
DUP-02 is a blind duplicate sample of GEI-10G.

Table 9
Summary of Analytical Results - Operable Unit 2 Refuse/Fill Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	GEI-3G	GEI-5G	GEI-6G	GEI-10G	DUP-02
Lab Sample Number	A2B54301	A2B60501	A2B60502	A2B65702	A2B65701
Sampling Date	11/19/2002	11/20/2002	11/20/2002	11/21/2002	11/21/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Metals (mg/L)					
Antimony, Dissolved	0.10 U	0.1 U	0.1 U	0.10 U	0.10 U
Arsenic, Dissolved	0.20 U	0.2 U	0.2 U	0.20 U	0.20 U
Barium, Dissolved	0.59	0.41	0.162	0.74	0.72
Beryllium, Dissolved	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Cadmium, Dissolved	0.050 U	0.05 U	0.05 U	0.50 U	0.050 U
Lead, Dissolved	0.050 U	0.05 U	0.05 U	0.50 U	0.050 U
Manganese, Dissolved	0.35	0.113	0.0749 B	0.088	0.087
Mercury, Dissolved	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U
Nickel, Dissolved	0.050 U	0.0362 B	0.146	0.043 B	0.042 B
Vanadium, Dissolved	0.030 U	0.03 U	0.03 U	0.030 U	0.030 U
Zinc, Dissolved	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
General Chemistry (mg/L)					
Biochemical Oxygen Demand (BOD)	26.5	29.2	52.6	22.9	19.6
Chemical Oxygen Demand (COD)	48.8	185	727	238	252
Chloride	93.8	1.0 U	1600	1110	1070
Cyanide, Total	0.010 U	0.010 U	0.14	0.010 U	0.010 U
Nitrogen, Nitrate	0.50 U	1.2	14.9	0.50 U	0.50 U
Phenolics, Total	0.018	0.043	0.11	0.011	0.010
Total Dissolved Solids (TDS)	827	10 U	4570	2330	2390
Total Organic Carbon (TOC)	16.4	46.9	198	52.8	52.0
Total Organic Halogen (TOX) (ug/L)	128	321	2400	473	827
Natural Attenuation (ug/L)					
Ethane	200 U	80 U	80 U	160 U	160 U
Ethene	150 U	60 U	60 U	120 U	120 U
Methane	6300	4100	3400	5800	4000

Notes:
U - Compound was analyzed for, but not detected.
B - Value is greater than or equal to the instrument detection limit, but less than the quantitation limit.
DUP-02 is a blind duplicate sample of GEI-10G.

Table 10
Summary of Analytical Results - Operable Unit 2 Sand and Gravel Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	WE-3S	WE-5S	GEI-6S	WE-7S	WE-10S
Lab Sample Number	A2B48905	A2B60505	A2B60503	A2B65706	A2B65704
Sampling Date	11/18/2002	11/20/2002	11/20/2002	11/21/2002	11/21/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Volatile Organic Compounds (ug/L)					
1,1,1-Trichloroethane	38 U	38 U	38 U	38 U	38 U
1,1,2,2-Tetrachloroethane	69 U	69 U	69 U	69 U	69 U
1,1,2-Trichloroethane	50 U	50 U	50 U	50 U	50 U
1,1-Dichloroethane	47 U	47 U	47 U	47 U	47 U
1,1-Dichloroethene	28 U	28 U	28 U	28 U	28 U
1,2-Dichloroethane	50 U	50 U	50 U	50 U	50 U
1,2-Dichloroethene (Total)	50 U	50 U	50 U	50 U	50 U
1,2-Dichloropropane	60 U	60 U	60 U	60 U	60 U
2-Chloroethylvinyl ether	100 U	100 U	100 U	100 U	100 U
Acrolein	4000 U	4000 U	4000 U	4000 U	4000 U
Acrylonitrile	4000 U	4000 U	4000 U	4000 U	4000 U
Benzene	44 U	350	97	44 U	44 U
Bromoform	47 U	47 U	47 U	47 U	47 U
Bromomethane	100 U	100 U	100 U	100 U	100 U
Carbon Tetrachloride	28 U	28 U	28 U	28 U	28 U
Chlorobenzene	60 U	60 U	60 U	210	60 U
Chloroethane	100 U	100 U	100 U	100 U	100 U
Chloroform	16 U	16 U	16 U	16 U	16 U
Chloromethane	100 U	100 U	100 U	100 U	100 U
cis-1,3-Dichloropropene	50 U	50 U	50 U	50 U	50 U
Dibromochloromethane	31 U	31 U	31 U	31 U	31 U
Dichlorobromomethane	22 U	22 U	22 U	22 U	22 U
Ethylbenzene	72 U	72 U	72 U	72 U	72 U
Methylene chloride	35 U	35 U	35 U	35 U	35 U
Tetrachloroethene	41 U	41 U	41 U	41 U	41 U
Toluene	320	60 U	60 U	60 U	60 U
trans-1,3-Dichloropropene	50 U	50 U	50 U	50 U	50 U
Trichloroethene	19 U	19 U	19 U	19 U	19 U
Vinyl chloride	100 U	100 U	100 U	100 U	100 U

Notes:
U - Compound was analyzed for, but not detected.

Table 10
Summary of Analytical Results - Operable Unit 2 Sand and Gravel Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	WE-3S	WE-5S	GEI-6S	WE-7S	WE-10S
Lab Sample Number	A2B48905	A2B60505	A2B60503	A2B65706	A2B65704
Sampling Date	11/18/2002	11/20/2002	11/20/2002	11/21/2002	11/21/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Semivolatile Organic Compounds (ug/L)					
1,2,4-Trichlorobenzene	3.6 U	3.8 U	1.9 U	1.9 U	1.9 U
1,2-Dichlorobenzene	2.9 J	3.8 U	1.9 U	1.9 U	1.9 U
1,2-Diphenylhydrazine	3.6 U	3.8 U	1.8 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3.6 U	3.8 U	1.9 U	0.55 J	1.9 U
1,4-Dichlorobenzene	4.4 U	4.4 U	4.4 U	1.8 J	4.4 U
2,2'-Oxybis(1-Chloropropane)	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
2,4,6-Trichlorophenol	3.6 U	3.8 U	2.7 U	2.7 U	2.7 U
2,4-Dichlorophenol	3.6 U	3.8 U	2.7 U	2.7 U	2.7 U
2,4-Dimethylphenol	510	5.1	2.7 U	3.3	2.7 U
2,4-Dinitrophenol	42 U	42 U	42 U	42 U	42 U
2,4-Dinitrotoluene	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
2,6-Dinitrotoluene	3.6 U	3.8 U	1.9 U	1.9 U	1.9 U
2-Chloronaphthalene	3.6 U	3.8 U	1.9 U	1.9 U	1.9 U
2-Chlorophenol	3.6 U	3.8 U	3.3 U	0.34 J	3.3 U
2-Nitrophenol	3.6 U	3.8 U	3.6 U	3.6 U	3.6 U
3,3'-Dichlorobenzidine	16 U	16 U	16 U	16 U	16 U
4-Bromophenyl phenyl ether	3.6 U	3.8 U	1.9 U	1.9 U	1.9 U
4-Chlorophenyl phenyl ether	3.6 U	3.8 U	1.8 U	1.0 U	1.0 U
4-Nitrophenol	3.6 U	3.8 U	2.4 U	2.4 U	2.4 U
Acenaphthene	3.6 U	17	1.9 U	0.38 J	1.9 U
Acenaphthylene	3.6 U	3.8 U	3.5 U	3.5 U	3.5 U
Anthracene	3.6 U	3.8 U	1.9 U	1.9 U	1.9 U
Benzidine	44 U	44 U	44 U	44 U	44 U
Benzo(a)anthracene	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U
Benzo(a)pyrene	3.6 U	3.8 U	2.5 U	2.5 U	2.5 U
Benzo(b)fluoranthene	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U
Benzo(ghi)perylene	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U
Benzo(k)fluoranthene	3.6 U	3.8 U	2.5 U	2.5 U	2.5 U
Bis(2-chloroethoxy) methane	5.3 U	5.3 U	5.3 U	5.3 U	5.3 U

Notes:
U - Compound was analyzed for, but not detected.
J - Estimated value.

Table 10
Summary of Analytical Results - Operable Unit 2 Sand and Gravel Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	WE-3S	WE-5S	GEI-6S	WE-7S	WE-10S
Lab Sample Number	A2B48905	A2B60505	A2B60503	A2B65706	A2B65704
Sampling Date	11/18/2002	11/20/2002	11/20/2002	11/21/2002	11/21/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Semivolatile Organic Compounds (ug/L)					
Bis(2-chloroethyl) ether	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
Bis(2-ethylhexyl) phthalate	3.6 U	3.8 U	1.8 U	0.90 U	0.90 U
Butyl benzyl phthalate	3.6 U	3.8 U	2.5 U	2.5 U	2.5 U
Chrysene	3.6 U	3.8 U	2.5 U	2.5 U	2.5 U
Cresol, 4,6-Dinitro-O-	24 U	24 U	24 U	24 U	24 U
Cresol, p-Chloro-m-	78	3.8 U	3.0 U	3.0 U	3.0 U
Dibenzo(a,h)anthracene	3.6 U	3.8 U	2.5 U	2.5 U	2.5 U
Diethyl phthalate	3.6 U	3.8 U	1.9 U	1.9 U	1.9 U
Dimethyl phthalate	3.6 U	3.8 U	1.8 U	1.6 U	1.6 U
Di-n-butyl phthalate	3.6 U	3.8 U	2.5 U	2.5 U	2.5 U
Di-n-octyl phthalate	3.6 U	3.8 U	2.5 U	0.27 J	2.5 U
Fluoranthene	3.6 U	3.8 U	2.2 U	2.2 U	2.2 U
Fluorene	3.6 U	3.8 U	1.9 U	1.9 U	1.9 U
Hexachlorobenzene	3.6 U	3.8 U	1.9 U	1.9 U	1.9 U
Hexachlorobutadiene	3.6 U	3.8 U	1.8 U	0.90 U	0.90 U
Hexachlorocyclopentadiene	3.6 U	3.8 U	1.8 U	1.0 U	1.0 U
Hexachloroethane	3.6 U	3.8 U	1.8 U	1.6 U	1.6 U
Indeno(1,2,3-cd)pyrene	3.7 U	3.8 U	3.7 U	3.7 U	3.7 U
Isophorone	3.6 U	3.8 U	2.2 U	2.2 U	2.2 U
Naphthalene	3.6 U	3.8 U	9.9	1.6 U	1.6 U
Nitrobenzene	3.6 U	3.8 U	1.9 U	1.9 U	1.9 U
N-Nitrosodimethylamine	3.6 U	3.8 U	2.2 U	2.2 U	2.2 U
N-Nitroso-Di-n-propylamine	3.6 U	3.8 U	3.3 U	3.3 U	3.3 U
N-nitrosodiphenylamine	3.6 U	3.8 U	8.6	1.9 U	1.9 U
Pentachlorophenol	3.6 U	3.8 U	3.6 U	3.6 U	3.6 U
Phenanthrene	5.4 U	2.7 J	2.6 J	5.4 U	5.4 U
Phenol	3.6 U	3.8 U	1.8 U	1.2 J	1.5 U
Pyrene	3.6 U	3.8 U	1.9 U	1.9 U	1.9 U

Notes:
U - Compound was analyzed for, but not detected.
J - Estimated value.

Table 10
Summary of Analytical Results - Operable Unit 2 Sand and Gravel Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	WE-3S	WE-5S	GEI-6S	WE-7S	WE-10S
Lab Sample Number	A2B48905	A2B60505	A2B60503	A2B65706	A2B65704
Sampling Date	11/18/2002	11/20/2002	11/20/2002	11/21/2002	11/21/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Pesticides/PCBs (ug/L)					
4,4'-DDD	0.19 U	0.038 U	0.038 U	0.019 U	0.0050 U
4,4'-DDE	0.19 U	0.038 U	0.038 U	0.019 U	0.0050 U
4,4'-DDT	0.19 U	0.038 U	0.038 U	0.019 U	0.0099
Aldrin	0.19 U	0.038 U	0.038 U	0.053	0.0050 U
alpha-BHC	0.19 U	0.038 U	0.038 U	0.019 U	0.0050 U
beta-BHC	0.19 U	0.038 U	0.47	0.019 U	0.0050 U
Chlordane	0.19 U	0.050 U	0.050 U	0.050 U	0.050 U
delta-BHC	0.30	0.038 U	0.26	0.019 U	0.0050 U
Dieldrin	0.19 U	0.038 U	0.038 U	0.18	0.0050 U
Endosulfan I	0.19 U	0.038 U	0.038 U	0.019 U	0.0050 U
Endosulfan II	0.19 U	0.038 U	0.038 U	0.019 U	0.0050 U
Endosulfan Sulfate	0.19 U	0.038 U	0.038 U	0.019 U	0.0050 U
Endrin	0.19 U	0.038 U	0.038 U	0.019 U	0.0050 U
Endrin aldehyde	0.19 U	0.038 U	0.038 U	0.019 U	0.0090
gamma-BHC (Lindane)	0.19 U	0.038 U	0.038 U	0.019 U	0.0050 U
Heptachlor	0.19 U	0.038 U	0.038 U	0.019 U	0.0050 U
Heptachlor epoxide	0.19 U	0.038 U	0.038 U	0.019 U	0.0050 U
Methoxychlor	0.19 U	0.038 U	0.12	0.019 U	0.0057
PCB 1016	4.8 U	0.95 U	0.95 U	0.48 U	0.050 U
PCB 1221	4.8 U	0.95 U	0.95 U	0.48 U	0.050 U
PCB 1232	4.8 U	0.95 U	0.95 U	0.48 U	0.050 U
PCB 1242	4.8 U	0.95 U	0.95 U	0.48 U	0.050 U
PCB 1248	4.8 U	0.95 U	0.95 U	0.48 U	0.050 U
PCB 1254	4.8 U	0.95 U	0.95 U	0.48 U	0.050 U
PCB 1260	4.8 U	0.95 U	0.95 U	0.48 U	0.050 U
Toxaphene	0.95 U	0.19 U	0.19 U	0.10 U	0.10 U

Notes:
PCBs - Polychlorinated biphenyls
U - Compound was analyzed for, but not detected.

Table 10
Summary of Analytical Results - Operable Unit 2 Sand and Gravel Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	WE-3S	WE-3S RE	WE-5S	GEI-6S	WE-7S
Lab Sample Number	A2B48905	A2B48905RE	A2B60505	A2B60503	A2B65706
Sampling Date	11/18/2002	11/18/2002	11/20/2002	11/20/2002	11/21/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Metals (mg/L)					
Antimony, Dissolved	0.10 U	NR	0.1 U	0.1 U	0.10 U
Arsenic, Dissolved	0.20 U	NR	0.2 U	0.2 U	0.20 U
Barium, Dissolved	0.402	NR	0.769	0.444	0.39
Beryllium, Dissolved	0.025 U	NR	0.025 U	0.025 U	0.025 U
Cadmium, Dissolved	0.050 U	NR	0.05 U	0.05 U	0.050 U
Lead, Dissolved	0.050 U	NR	0.05 U	0.05 U	0.050 U
Manganese, Dissolved	1.640	NR	3.05	0.245	1.82
Mercury, Dissolved	0.00020 U	NR	0.00020 U	0.00020 U	0.00020 U
Nickel, Dissolved	0.0316 B	NR	0.0313 B	0.0444	0.028 B
Vanadium, Dissolved	0.0702	NR	0.0116 B	0.03 U	0.030 U
Zinc, Dissolved	0.25 U	NR	0.25 U	0.25 U	0.25 U
General Chemistry (mg/L)					
Biochemical Oxygen Demand (BOD)	90.0 E	9.1	10.4	21.6	14.0
Chemical Oxygen Demand (COD)	1040	NR	366	301	301
Chloride	3210	NR	2900	482	2040
Cyanide, Total	0.010 U	NR	0.010 U	0.010 U	0.010 U
Nitrogen, Nitrate	0.50 U	NR	0.50 U	0.50 U	0.50 U
Phenolics, Total	0.31	NR	0.023	0.028	0.021
Total Dissolved Solids (TDS)	10100	NR	5580	1480	3900
Total Organic Carbon (TOC)	283	NR	80.4	88.5	43.7
Total Organic Halogen (TOX) (ug/L)	4890	NR	5580	340	844
Natural Attenuation (ug/L)					
Ethane	80 U	NR	200 U	4.0 U	35
Ethene	60 U	NR	150 U	3.0 U	15 U
Methane	3600	NR	5300	99	1400

Notes:
U - Compound was analyzed for, but not detected.
B - Value is greater than or equal to the instrument detection limit, but less than the quantitation limit.
E - Value is estimated due to the presence of interferences.
NR - Compound was not analyzed.
RE - Sample was reanalyzed by the laboratory.

Table 10
Summary of Analytical Results - Operable Unit 2 Sand and Gravel Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	WE-10S
Lab Sample Number	A2B65704
Sampling Date	11/21/2002
Matrix	GROUNDWATER
Metals (mg/L)	
Antimony, Dissolved	0.10 U
Arsenic, Dissolved	0.20 U
Barium, Dissolved	0.50
Beryllium, Dissolved	0.025 U
Cadmium, Dissolved	0.050 U
Lead, Dissolved	0.050 U
Manganese, Dissolved	1.68
Mercury, Dissolved	0.00020 U
Nickel, Dissolved	0.050 U
Vanadium, Dissolved	0.030 U
Zinc, Dissolved	0.25 U
General Chemistry (mg/L)	
Biochemical Oxygen Demand (BOD)	2.0 U
Chemical Oxygen Demand (COD)	104
Chloride	3750
Cyanide, Total	0.010 U
Nitrogen, Nitrate	0.50 U
Phenolics, Total	0.0050 U
Total Dissolved Solids (TDS)	10900
Total Organic Carbon (TOC)	10.9
Total Organic Halogen (TOX) (ug/L)	144
Natural Attenuation (ug/L)	
Ethane	4.0 U
Ethene	3.0 U
Methane	98

Notes:
U - Compound was analyzed for, but not detected.

Table 11
Summary of Analytical Results - Operable Unit 2 Bedrock Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	WE-3R	WE-5R	WE-6R	WE-7R	WE-10R
Lab Sample Number	A2B48904	A2B60504	A2B54302	A2B65705	A2B65703
Sampling Date	11/18/2002	11/20/2002	11/19/2002	11/21/2002	11/21/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Volatile Organic Compounds (ug/L)					
1,1,1-Trichloroethane	19 U	19 U	19 U	19 U	19 U
1,1,2,2-Tetrachloroethane	34 U	34 U	34 U	34 U	34 U
1,1,2-Trichloroethane	25 U	25 U	25 U	25 U	25 U
1,1-Dichloroethane	24 U	24 U	24 U	24 U	24 U
1,1-Dichloroethene	14 U	14 U	14 U	14 U	14 U
1,2-Dichloroethane	25 U	25 U	25 U	25 U	25 U
1,2-Dichloroethene (Total)	25 U	25 U	25 U	25 U	25 U
1,2-Dichloropropane	30 U	30 U	30 U	30 U	30 U
2-Chloroethylvinyl ether	50 U	50 U	50 U	50 U	50 U
Acrolein	2000 U	2000 U	2000 U	2000 U	2000 U
Acrylonitrile	2000 U	2000 U	2000 U	2000 U	2000 U
Benzene	22 U	22 U	22 U	22 U	22 U
Bromoform	24 U	24 U	24 U	24 U	24 U
Bromomethane	50 U	50 U	50 U	50 U	50 U
Carbon Tetrachloride	14 U	14 U	14 U	14 U	14 U
Chlorobenzene	30 U	30 U	30 U	30 U	30 U
Chloroethane	50 U	50 U	50 U	50 U	50 U
Chloroform	8 U	8 U	8 U	8 U	8 U
Chloromethane	50 U	50 U	50 U	50 U	50 U
cis-1,3-Dichloropropene	25 U	25 U	25 U	25 U	25 U
Dibromochloromethane	16 U	16 U	16 U	16 U	16 U
Dichlorobromomethane	11 U	11 U	11 U	11 U	11 U
Ethylbenzene	36 U	36 U	36 U	36 U	36 U
Methylene chloride	18 U	18 U	18 U	18 U	18 U
Tetrachloroethene	20 U	20 U	20 U	20 U	20 U
Toluene	30 U	30 U	30 U	30 U	30 U
trans-1,3-Dichloropropene	25 U	25 U	25 U	25 U	25 U
Trichloroethene	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	50 U	50 U	50 U	50 U	50 U

Notes:
U - Compound was analyzed for, but not detected.

Table 11
Summary of Analytical Results - Operable Unit 2 Bedrock Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	WE-114DR
Lab Sample Number	A2B43905
Sampling Date	11/15/2002
Matrix	GROUNDWATER
Volatile Organic Compounds (ug/L)	
1,1,1-Trichloroethane	4 U
1,1,2,2-Tetrachloroethane	7 U
1,1,2-Trichloroethane	5 U
1,1-Dichloroethane	5 U
1,1-Dichloroethene	3 U
1,2-Dichloroethane	5 U
1,2-Dichloroethene (Total)	5 U
1,2-Dichloropropane	6 U
2-Chloroethylvinyl ether	10 U
Acrolein	400 U
Acrylonitrile	400 U
Benzene	4 U
Bromoform	5 U
Bromomethane	10 U
Carbon Tetrachloride	3 U
Chlorobenzene	6 U
Chloroethane	10 U
Chloroform	2 U
Chloromethane	10 U
cis-1,3-Dichloropropene	5 U
Dibromochloromethane	3 U
Dichlorobromomethane	2 U
Ethylbenzene	7 U
Methylene chloride	4 U
Tetrachloroethene	4 U
Toluene	6 U
trans-1,3-Dichloropropene	5 U
Trichloroethene	2 U
Vinyl chloride	10 U

Notes:
U - Compound was analyzed for, but not detected

Table 11
Summary of Analytical Results - Operable Unit 2 Bedrock Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID Lab Sample Number Sampling Date Matrix	WE-3R A2B48904 11/18/2002 GROUNDWATER	WE-5R A2B60504 11/20/2002 GROUNDWATER	WE-6R A2B54302 11/19/2002 GROUNDWATER	WE-7R A2B65705 11/21/2002 GROUNDWATER	WE-10R A2B65703 11/21/2002 GROUNDWATER
Semivolatile Organic Compounds (ug/L)					
1,2,4-Trichlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
1,2-Dichlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
1,2-Diphenylhydrazine	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
1,4-Dichlorobenzene	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U
2,2'-Oxybis(1-Chloropropane)	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
2,4,6-Trichlorophenol	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
2,4-Dichlorophenol	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
2,4-Dimethylphenol	2.7 U	0.33 J	2.7 U	2.7 U	2.7 U
2,4-Dinitrophenol	42 U	42 U	42 U	42 U	42 U
2,4-Dinitrotoluene	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
2,6-Dinitrotoluene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2-Chloronaphthalene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2-Chlorophenol	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
2-Nitrophenol	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
3,3'-Dichlorobenzidine	16 U	16 U	16 U	16 U	16 U
4-Bromophenyl phenyl ether	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
4-Chlorophenyl phenyl ether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Nitrophenol	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
Acenaphthene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Acenaphthylene	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
Anthracene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzidine	44 U	44 U	44 U	44 U	44 U
Benzo(a)anthracene	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U
Benzo(a)pyrene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Benzo(b)fluoranthene	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U
Benzo(ghi)perylene	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U
Benzo(k)fluoranthene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Bis(2-chloroethoxy) methane	5.3 U	5.3 U	5.3 U	5.3 U	5.3 U

Notes:
U - Compound was analyzed for, but not detected.
J - Estimated value.

Table 11
Summary of Analytical Results - Operable Unit 2 Bedrock Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID Lab Sample Number Sampling Date Matrix	WE-3R A2B48904 11/18/2002 GROUNDWATER	WE-5R A2B60504 11/20/2002 GROUNDWATER	WE-6R A2B54302 11/19/2002 GROUNDWATER	WE-7R A2B65705 11/21/2002 GROUNDWATER	WE-10R A2B65703 11/21/2002 GROUNDWATER
Semivolatile Organic Compounds (ug/L)					
Bis(2-chloroethyl) ether	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
Bis(2-ethylhexyl) phthalate	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U
Butyl benzyl phthalate	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Chrysene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Cresol, 4,6-Dinitro-O-	24 U	24 U	24 U	24 U	24 U
Cresol, p-Chloro-m-	3.0 U	1.7 J	3.0 U	3.0 U	3.0 U
Dibenzo(a,h)anthracene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Diethyl phthalate	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Dimethyl phthalate	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Di-n-butyl phthalate	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Di-n-octyl phthalate	1.0 BJ	2.5 U	0.42 BJ	2.5 U	2.5 U
Fluoranthene	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
Fluorene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobutadiene	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U
Hexachlorocyclopentadiene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloroethane	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Indeno(1,2,3-cd)pyrene	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U
Isophorone	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
Naphthalene	1.6 U	1.6 U	1.6 U	1.6 U	14 B
Nitrobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
N-Nitrosodimethylamine	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
N-Nitroso-Di-n-propylamine	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
N-nitrosodiphenylamine	1.9 U	1.9 U	1.4 J	1.9 U	1.9 U
Pentachlorophenol	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
Phenanthrene	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U
Phenol	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
Pyrene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U

Notes:
U - Compound was analyzed for, but not detected.
J - Estimated value.
B - Analyte was found in associated blank, as well as the sample.

Table 11
Summary of Analytical Results - Operable Unit 2 Bedrock Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	WE-114DR
Lab Sample Number	A2B43905
Sampling Date	11/15/2002
Matrix	GROUNDWATER
Semivolatile Organic Compounds (ug/L)	
1,2,4-Trichlorobenzene	1.9 U
1,2-Dichlorobenzene	1.9 U
1,2-Diphenylhydrazine	1.0 U
1,3-Dichlorobenzene	1.9 U
1,4-Dichlorobenzene	4.4 U
2,2'-Oxybis(1-Chloropropane)	5.7 U
2,4,6-Trichlorophenol	2.7 U
2,4-Dichlorophenol	2.7 U
2,4-Dimethylphenol	2.7 U
2,4-Dinitrophenol	42 U
2,4-Dinitrotoluene	5.7 U
2,6-Dinitrotoluene	1.9 U
2-Chloronaphthalene	1.9 U
2-Chlorophenol	3.3 U
2-Nitrophenol	3.6 U
3,3'-Dichlorobenzidine	16 U
4-Bromophenyl phenyl ether	1.9 U
4-Chlorophenyl phenyl ether	1.0 U
4-Nitrophenol	2.4 U
Acenaphthene	1.9 U
Acenaphthylene	3.5 U
Anthracene	1.9 U
Benzidine	44 U
Benzo(a)anthracene	7.8 U
Benzo(a)pyrene	2.5 U
Benzo(b)fluoranthene	4.8 U
Benzo(ghi)perylene	4.1 U
Benzo(k)fluoranthene	2.5 U
Bis(2-chloroethoxy) methane	5.3 U

Notes:
U - Compound was analyzed for, but not detected.

Table 11
Summary of Analytical Results - Operable Unit 2 Bedrock Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	WE-114DR
Lab Sample Number	A2B43905
Sampling Date	11/15/2002
Matrix	GROUNDWATER
Semivolatile Organic Compounds (ug/L)	
Bis(2-chloroethyl) ether	5.7 U
Bis(2-ethylhexyl) phthalate	0.90 U
Butyl benzyl phthalate	2.5 U
Chrysene	2.5 U
Cresol, 4,6-Dinitro-O-	24 U
Cresol, p-Chloro-m-	3.0 U
Dibenzo(a,h)anthracene	2.5 U
Diethyl phthalate	1.9 U
Dimethyl phthalate	1.6 U
Di-n-butyl phthalate	2.5 U
Di-n-octyl phthalate	2.5 U
Fluoranthene	2.2 U
Fluorene	1.9 U
Hexachlorobenzene	1.9 U
Hexachlorobutadiene	0.90 U
Hexachlorocyclopentadiene	1.0 U
Hexachloroethane	1.6 U
Indeno(1,2,3-cd)pyrene	3.7 U
Isophorone	2.2 U
Naphthalene	1.6 U
Nitrobenzene	1.9 U
N-Nitrosodimethylamine	2.2 U
N-Nitroso-Di-n-propylamine	3.3 U
N-nitrosodiphenylamine	1.9 U
Pentachlorophenol	3.6 U
Phenanthrene	5.4 U
Phenol	1.5 U
Pyrene	1.9 U

Notes:
U - Compound was analyzed for, but not detected.

Table 11
Summary of Analytical Results - Operable Unit 2 Bedrock Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID Lab Sample Number Sampling Date Matrix	WE-3R A2B48904 11/18/2002 GROUNDWATER	WE-5R A2B60504 11/20/2002 GROUNDWATER	WE-6R A2B54302 11/19/2002 GROUNDWATER	WE-7R A2B65705 11/21/2002 GROUNDWATER	WE-10R A2B65703 11/21/2002 GROUNDWATER
Pesticides/PCBs (ug/L)					
4,4'-DDD	0.0050 U	0.0050 U	0.024 U	0.0050 U	0.0050 U
4,4'-DDE	0.0050 U	0.0050 U	0.024 U	0.0050 U	0.0050 U
4,4'-DDT	0.0061	0.0070	0.024 U	0.0050 U	0.0050 U
Aldrin	0.0050 U	0.0050 U	0.024 U	0.0050 U	0.0050 U
alpha-BHC	0.0050 U	0.0050 U	0.024 U	0.0050 U	0.0050 U
beta-BHC	0.0050 U	0.0050 U	0.024 U	0.0050 U	0.0050 U
Chlordane	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
delta-BHC	0.0040 J	0.0059	0.065	0.0050 U	0.0050 U
Dieldrin	0.0050 U	0.0050 U	0.024 U	0.0050 U	0.0050 U
Endosulfan I	0.0050 U	0.0050 U	0.024 U	0.0050 U	0.0050 U
Endosulfan II	0.0050 U	0.0050 U	0.024 U	0.0050 U	0.0050 U
Endosulfan Sulfate	0.0050 U	0.0050 U	0.024 U	0.0050 U	0.0050 U
Endrin	0.0050 U	0.0050 U	0.024 U	0.0050 U	0.0050 U
Endrin aldehyde	0.0050 U	0.0050 U	0.024 U	0.0050 U	0.0050 U
gamma-BHC (Lindane)	0.0050 U	0.0050 U	0.024 U	0.0050 U	0.0050 U
Heptachlor	0.0050 U	0.0050 U	0.024 U	0.0050 U	0.0050 U
Heptachlor epoxide	0.0050 U	0.0050 U	0.024 U	0.0050 U	0.0050 U
Methoxychlor	0.050 U	0.095 U	0.60 U	0.050 U	0.050 U
PCB 1016	0.050 U	0.095 U	0.60 U	0.050 U	0.050 U
PCB 1221	0.050 U	0.095 U	0.60 U	0.050 U	0.050 U
PCB 1232	0.050 U	0.095 U	0.60 U	0.050 U	0.050 U
PCB 1242	0.050 U	0.095 U	0.60 U	0.050 U	0.050 U
PCB 1248	0.050 U	0.095 U	0.60 U	0.050 U	0.050 U
PCB 1254	0.050 U	0.095 U	0.60 U	0.050 U	0.050 U
PCB 1260	0.10 U	0.10 U	0.12 U	0.10 U	0.10 U
Toxaphene					

Notes:
PCBs - Polychlorinated biphenyls
U - Compound was analyzed for, but not detected.
J - Estimated value

Table 11
Summary of Analytical Results - Operable Unit 2 Bedrock Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	WE-114DR
Lab Sample Number	A2B43905
Sampling Date	11/15/2002
Matrix	GROUNDWATER
Pesticides/PCBs (ug/L)	
4,4'-DDD	0.0050 U
4,4'-DDE	0.0050 U
4,4'-DDT	0.0050 U
Aldrin	0.0050 U
alpha-BHC	0.0050 U
beta-BHC	0.0050 U
Chlordane	0.050 U
delta-BHC	0.0050 U
Dieldrin	0.0050 U
Endosulfan I	0.0050 U
Endosulfan II	0.0050 U
Endosulfan Sulfate	0.0050 U
Endrin	0.0050 U
Endrin aldehyde	0.0050 U
gamma-BHC (Lindane)	0.0050 U
Heptachlor	0.0050 U
Heptachlor epoxide	0.0050 U
Methoxychlor	0.050 U
PCB 1016	0.050 U
PCB 1221	0.050 U
PCB 1232	0.050 U
PCB 1242	0.050 U
PCB 1248	0.050 U
PCB 1254	0.050 U
PCB 1260	0.10 U
Toxaphene	

Notes:
PCBs - Polychlorinated biphenyls
U - Compound was analyzed for, but not detected.

Table 11
Summary of Analytical Results - Operable Unit 2 Bedrock Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	WE-3R	WE-5R	WE-6R	WE-7R	WE-10R
Lab Sample Number	A2B48904	A2B60504	A2B54302	A2B65705	A2B65703
Sampling Date	11/18/2002	11/20/2002	11/19/2002	11/21/2002	11/21/2002
Matrix	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
Metals (mg/L)					
Antimony, Dissolved	0.10 U	0.1 U	0.10 U	0.10 U	0.10 U
Arsenic, Dissolved	0.20 U	0.2 U	0.20 U	0.20 U	11 B
Barium, Dissolved	0.154	0.0976	0.47	0.088	10
Beryllium, Dissolved	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Cadmium, Dissolved	0.050 U	0.05 U	0.050 U	0.050 U	0.050 U
Lead, Dissolved	0.050 U	0.05 U	0.050 U	0.050 U	0.050 U
Manganese, Dissolved	0.779	1.08	0.89	1.81	2.61
Mercury, Dissolved	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U
Nickel, Dissolved	0.0728	0.0326 B	0.035 B	0.13	.018 B
Vanadium, Dissolved	0.030 U	0.03 U	0.030 U	0.030 U	0.030 U
Zinc, Dissolved	0.25 U	0.25 U	0.25 U	0.25 U	0.250 U
General Chemistry (mg/L)					
Biochemical Oxygen Demand (BOD)	2.0 U	2.0 U	9.6	2.0 U	2.0 U
Chemical Oxygen Demand (COD)	70.8	76.7	234	19.5	174
Chloride	5780	5480	3140	2950	6540
Cyanide, Total	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Nitrogen, Nitrate	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Phenolics, Total	0.0050 U	0.0050 U	0.010	0.0050 U	0.0050 U
Total Dissolved Solids (TDS)	11700	9630	5520	5560	10600
Total Organic Carbon (TOC)	13.7	9.9	24.8	1.4	4.2
Total Organic Halogen (TOX) (ug/L)	111	160	180	56.0	51.3
Natural Attenuation (ug/L)					
Ethane	4.0 U	4.0 U	20 U	4.0 U	4.0 U
Ethene	3.0 U	3.0 U	15 U	3.0 U	3.0 U
Methane	59	30	830	5.4	180

Notes:
U - Compound was analyzed for, but not detected.
B - Value is greater than or equal to the instrument detection limit, but less than the quantitation limit.

Table 11
Summary of Analytical Results - Operable Unit 2 Bedrock Monitoring Wells
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	WE-114DR
Lab Sample Number	A2B43905
Sampling Date	11/15/2002
Matrix	GROUNDWATER
Metals (mg/L)	
Antimony, Dissolved	0.10 U
Arsenic, Dissolved	0.20 U
Barium, Dissolved	0.0534
Beryllium, Dissolved	0.025 U
Cadmium, Dissolved	0.050 U
Lead, Dissolved	0.050 U
Manganese, Dissolved	0.468
Mercury, Dissolved	0.00020 U
Nickel, Dissolved	0.050 U
Vanadium, Dissolved	0.030 U
Zinc, Dissolved	0.25 U
General Chemistry (mg/L)	
Biochemical Oxygen Demand (BOD)	8.1
Chemical Oxygen Demand (COD)	5.0 U
Chloride	56.1
Cyanide, Total	0.010 U
Nitrogen, Nitrate	0.50 U
Phenolics, Total	0.0050 U
Total Dissolved Solids (TDS)	561
Total Organic Carbon (TOC)	2.3
Total Organic Halogen (TOX) (ug/L)	24.5
Natural Attenuation (ug/L)	
Ethane	20 U
Ethene	15 U
Methane	910

Notes:
U - Compound was analyzed for, but not detected.
B - Value is greater than or equal to the instrument detection limit, but less than the quantitation limit.

Table 12
Summary of Analytical Results - Trip Blanks and Field Blanks
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	FB111102	TB111102	FB111202	TB111202	FB111302
Lab Sample Number	A2B16003	A2B16004	A2B24006	A2B24007	A2B33203
Sampling Date	11/11/2002	11/11/2002	11/12/2002	11/12/2002	11/13/2002
Matrix	WATER	WATER	WATER	WATER	WATER
Volatile Organic Compounds (ug/L)					
1,1,1-Trichloroethane	4 U	4 U	4 U	4 U	4 U
1,1,2,2-Tetrachloroethane	7 U	7 U	7 U	7 U	7 U
1,1,2-Trichloroethane	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	3 U	3 U	3 U	3 U	3 U
1,2-Dichloroethane	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethene (Total)	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	6 U	6 U	6 U	6 U	6 U
2-Chloroethylvinyl ether	10 U	10 U	10 U	10 U	10 U
Acrolein	400 U	400 U	400 U	400 U	400 U
Acrylonitrile	400 U	400 U	400 U	400 U	400 U
Benzene	4 U	4 U	4 U	4 U	4 U
Bromoform	5 U	5 U	5 U	5 U	5 U
Bromomethane	10 U	10 U	10 U	10 U	10 U
Carbon Tetrachloride	3 U	3 U	3 U	3 U	3 U
Chlorobenzene	6 U	6 U	6 U	6 U	6 U
Chloroethane	10 U	10 U	10 U	10 U	10 U
Chloroform	2 U	2 U	2 U	2 U	2 U
Chloromethane	10 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	3 U	3 U	3 U	3 U	3 U
Dichlorobromomethane	2 U	2 U	2 U	2 U	2 U
Ethylbenzene	7 U	7 U	7 U	7 U	7 U
Methylene chloride	4 U	4 U	4 U	4 U	4 U
Tetrachloroethene	4 U	4 U	4 U	4 U	4 U
Toluene	6 U	6 U	6 U	6 U	6 U
trans-1,3-Dichloropropene	5 U	5 U	5 U	5 U	5 U
Trichloroethene	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	10 U	10 U	10 U	10 U	10 U

Notes:
U - Compound was analyzed for, but not detected.

Table 12
Summary of Analytical Results - Trip Blanks and Field Blanks
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	TB111302	FB111402	TB111402	FB111502	TB111502
Lab Sample Number	A2B33204	A2B40108	A2B40109	A2B43906	A2B43907
Sampling Date	11/13/2002	11/14/2002	11/14/2002	11/15/2002	11/15/2002
Matrix	WATER	WATER	WATER	WATER	WATER
Volatile Organic Compounds (ug/L)					
1,1,1-Trichloroethane	4 U	4 U	4 U	4 U	4 U
1,1,2,2-Tetrachloroethane	7 U	7 U	7 U	7 U	7 U
1,1,2-Trichloroethane	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	3 U	3 U	3 U	3 U	3 U
1,2-Dichloroethane	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethene (Total)	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	6 U	6 U	6 U	6 U	6 U
2-Chloroethylvinyl ether	10 U	10 U	10 U	10 U	10 U
Acrolein	400 U	400 U	400 U	400 U	400 U
Acrylonitrile	400 U	400 U	400 U	400 U	400 U
Benzene	4 U	4 U	4 U	4 U	4 U
Bromoform	5 U	5 U	5 U	5 U	5 U
Bromomethane	10 U	10 U	10 U	10 U	10 U
Carbon Tetrachloride	3 U	3 U	3 U	3 U	3 U
Chlorobenzene	6 U	6 U	6 U	6 U	6 U
Chloroethane	10 U	10 U	10 U	10 U	10 U
Chloroform	2 U	2 U	2 U	2 U	2 U
Chloromethane	10 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	3 U	3 U	3 U	3 U	3 U
Dichlorobromomethane	2 U	2 U	2 U	2 U	2 U
Ethylbenzene	7 U	7 U	7 U	7 U	7 U
Methylene chloride	4 U	4 U	4 U	4 U	4 U
Tetrachloroethene	4 U	4 U	4 U	4 U	4 U
Toluene	6 U	6 U	6 U	6 U	6 U
trans-1,3-Dichloropropene	5 U	5 U	5 U	5 U	5 U
Trichloroethene	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	10 U	10 U	10 U	10 U	10 U

Notes:
U - Compound was analyzed for, but not detected.

Table 12
Summary of Analytical Results - Trip Blanks and Field Blanks
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Sample ID	FB111802	TB111802	FB111902	TB111902	FB112002
Lab Sample Number	A2B48906	A2B48907	A2B54303	A2B54304	A2B60506
Sampling Date	11/18/2002	11/18/2002	11/19/2002	11/19/2002	11/20/2002
Matrix	WATER	WATER	WATER	WATER	WATER
Volatile Organic Compounds (ug/L)					
1,1,1-Trichloroethane	4 U	4 U	4 U	4 U	4 U
1,1,2,2-Tetrachloroethane	7 U	7 U	7 U	7 U	7 U
1,1,2-Trichloroethane	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	3 U	3 U	3 U	3 U	3 U
1,2-Dichloroethane	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethene (Total)	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	6 U	6 U	6 U	6 U	6 U
2-Chloroethylvinyl ether	10 U	10 U	10 U	10 U	10 U
Acrolein	400 U	400 U	400 U	400 U	400 U
Acrylonitrile	400 U	400 U	400 U	400 U	400 U
Benzene	4 U	4 U	4 U	4 U	4 U
Bromoform	5 U	5 U	5 U	5 U	5 U
Bromomethane	10 U	10 U	10 U	10 U	10 U
Carbon Tetrachloride	3 U	3 U	3 U	3 U	3 U
Chlorobenzene	6 U	6 U	6 U	6 U	6 U
Chloroethane	10 U	10 U	10 U	10 U	10 U
Chloroform	2 U	2 U	2 U	2 U	2 U
Chloromethane	10 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	3 U	3 U	3 U	3 U	3 U
Dichlorobromomethane	2 U	2 U	2 U	2 U	2 U
Ethylbenzene	7 U	7 U	7 U	7 U	7 U
Methylene chloride	4 U	4 U	4 U	4 U	4 U
Tetrachloroethene	4 U	4 U	4 U	4 U	4 U
Toluene	6 U	6 U	6 U	6 U	6 U
trans-1,3-Dichloropropene	5 U	5 U	5 U	5 U	5 U
Trichloroethene	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	10 U	10 U	10 U	10 U	10 U

Notes:
U - Compound was analyzed for, but not detected.

Table 12
Summary of Analytical Results - Trip Blanks and Field Blanks
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Sample ID	TB112002	FB112102	TB112102	FB-SW-112102	TB-SW-112102
Lab Sample Number	A2B60507	A2B65707	A2B65708	A2B66005	A2B66006
Sampling Date	11/20/2002	11/21/2002	11/21/2002	11/21/2002	11/21/2002
Matrix	WATER	WATER	WATER	WATER	WATER
Volatile Organic Compounds (ug/L)					
1,1,1-Trichloroethane	4 U	4 U	10 U	4 U	4 U
1,1,2,2-Tetrachloroethane	7 U	7 U	10 U	7 U	7 U
1,1,2-Trichloroethane	5 U	5 U	10 U	5 U	5 U
1,1-Dichloroethane	5 U	5 U	4 U	5 U	5 U
1,1-Dichloroethene	3 U	3 U	2 U	3 U	3 U
1,2-Dichloroethane	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethene (Total)	5 U	5 U	10 U	5 U	5 U
1,2-Dichloropropane	6 U	6 U	4 U	6 U	6 U
2-Chloroethylvinyl ether	10 U	10 U	5 U	10 U	10 U
Acrolein	400 U	400 U	3 U	400 U	400 U
Acrylonitrile	400 U	400 U	4 U	400 U	400 U
Benzene	4 U	4 U	2 U	4 U	4 U
Bromoform	5 U	5 U	5 U	5 U	5 U
Bromomethane	10 U	10 U	3 U	10 U	10 U
Carbon Tetrachloride	3 U	3 U	5 U	3 U	3 U
Chlorobenzene	6 U	6 U	6 U	6 U	6 U
Chloroethane	10 U	10 U	2 U	10 U	10 U
Chloroform	2 U	2 U	7 U	2 U	2 U
Chloromethane	10 U	10 U	5 U	10 U	10 U
cis-1,3-Dichloropropene	5 U	5 U	7 U	5 U	5 U
Dibromochloromethane	3 U	3 U	5 U	3 U	3 U
Dichlorobromomethane	2 U	2 U	400 U	2 U	2 U
Ethylbenzene	7 U	7 U	4 U	7 U	7 U
Methylene chloride	4 U	4 U	400 U	4 U	4 U
Tetrachloroethene	4 U	4 U	5 U	4 U	4 U
Toluene	6 U	6 U	6 U	6 U	6 U
trans-1,3-Dichloropropene	5 U	5 U	6 U	5 U	5 U
Trichloroethene	2 U	2 U	3 U	2 U	2 U
Vinyl chloride	10 U	10 U	10 U	10 U	10 U

Notes:
U - Compound was analyzed for, but not detected.

Table 12
Summary of Analytical Results - Trip Blanks and Field Blanks
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Sample ID Lab Sample Number Sampling Date Matrix	FB111102 A2B16003 11/11/2002 WATER	FB111202 RE A2B24006RE 11/12/2002 WATER	FB111302 A2B33203 11/13/2002 WATER	FB111402 A2B40108 11/14/2002 WATER	FB111502 A2B43906 11/15/2002 WATER
Semivolatile Organic Compounds (ug/L)					
1,2,4-Trichlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
1,2-Dichlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
1,2-Diphenylhydrazine	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
1,4-Dichlorobenzene	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U
2,2'-Oxybis(1-Chloropropane)	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
2,4,6-Trichlorophenol	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
2,4-Dichlorophenol	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
2,4-Dimethylphenol	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
2,4-Dinitrophenol	42 U	42 U	42 U	42 U	42 U
2,4-Dinitrotoluene	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
2,6-Dinitrotoluene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2-Chloronaphthalene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2-Chlorophenol	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
2-Nitrophenol	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
3,3'-Dichlorobenzidine	16 U	16 U	16 U	16 U	16 U
4-Bromophenyl phenyl ether	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
4-Chlorophenyl phenyl ether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Nitrophenol	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
Acenaphthene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Acenaphthylene	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
Anthracene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzidine	44 U	44 U	44 U	44 U	44 U
Benzo(a)anthracene	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U
Benzo(a)pyrene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Benzo(b)fluoranthene	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U
Benzo(ghi)perylene	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U
Benzo(k)fluoranthene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Bis(2-chloroethoxy) methane	5.3 U	5.3 U	5.3 U	5.3 U	5.3 U

Notes:
U - Compound was analyzed for, but not detected.
RE - Sample was reanalyzed by the laboratory.

Table 12
Summary of Analytical Results - Trip Blanks and Field Blanks
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID Lab Sample Number Sampling Date Matrix	FB111102 A2B16003 11/11/2002 WATER	FB111202 RE A2B24006RE 11/12/2002 WATER	FB111302 A2B33203 11/13/2002 WATER	FB111402 A2B40108 11/14/2002 WATER	FB111502 A2B43906 11/15/2002 WATER
Semivolatile Organic Compounds (ug/L)					
Bis(2-chloroethyl) ether	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
Bis(2-ethylhexyl) phthalate	0.90 U	0.90 U	0.27 J	0.90 U	0.90 U
Butyl benzyl phthalate	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Chrysene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Cresol, 4,6-Dinitro-O-	24 U	24 U	24 U	24 U	24 U
Cresol, p-Chloro-m-	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Dibenzo(a,h)anthracene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Diethyl phthalate	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Dimethyl phthalate	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Di-n-butyl phthalate	2.5 U	2.5 U	2.5 U	0.60 BJ	2.5 U
Di-n-octyl phthalate	2.5 U	0.52 BJ	0.42 BJ	2.5 U	2.5 U
Fluoranthene	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
Fluorene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobutadiene	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U
Hexachlorocyclopentadiene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloroethane	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Indeno(1,2,3-cd)pyrene	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U
Isophorone	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
Naphthalene	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Nitrobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
N-Nitrosodimethylamine	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
N-Nitroso-Di-n-propylamine	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
N-nitrosodiphenylamine	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Pentachlorophenol	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
Phenanthrene	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U
Phenol	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
Pyrene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U

Notes:
U - Compound was analyzed for, but not detected.
J - Estimated value.
B - Analyte was found in associated blank, as well as the sample.
RE - Sample was reanalyzed by the laboratory.

Table 12
Summary of Analytical Results - Trip Blanks and Field Blanks
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Kin-Buc Landfill
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Sample ID	FB111802	FB111902	FB112002	FB112102	FB-SW-112102
Lab Sample Number	A2B48906	A2B54303	A2B60506	A2B65707	A2B66005
Sampling Date	11/18/2002	11/19/2002	11/20/2002	11/21/2002	11/21/2002
Matrix	WATER	WATER	WATER	WATER	WATER
Semivolatile Organic Compounds (ug/L)					
1,2,4-Trichlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
1,2-Dichlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
1,2-Diphenylhydrazine	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
1,4-Dichlorobenzene	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U
2,2'-Oxybis(1-Chloropropane)	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
2,4,6-Trichlorophenol	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
2,4-Dichlorophenol	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
2,4-Dimethylphenol	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
2,4-Dinitrophenol	42 U	42 U	42 U	42 U	42 U
2,4-Dinitrotoluene	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
2,6-Dinitrotoluene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2-Chloronaphthalene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
2-Chlorophenol	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
2-Nitrophenol	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
3,3'-Dichlorobenzidine	16 U	16 U	16 U	16 U	16 U
4-Bromophenyl phenyl ether	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
4-Chlorophenyl phenyl ether	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Nitrophenol	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
Acenaphthene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Acenaphthylene	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
Anthracene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzidine	44 U	44 U	44 U	44 U	44 U
Benzo(a)anthracene	7.8 U	7.8 U	7.8 U	7.8 U	7.8 U
Benzo(a)pyrene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Benzo(b)fluoranthene	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U
Benzo(ghi)perylene	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U
Benzo(k)fluoranthene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Bis(2-chloroethoxy) methane	5.3 U	5.3 U	5.3 U	5.3 U	5.3 U

Notes:
U - Compound was analyzed for, but not detected.

Table 12
Summary of Analytical Results - Trip Blanks and Field Blanks
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Kin-Buc Landfill
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Sample ID	FB111802	FB111902	FB112002	FB112102	FB-SW-112102
Lab Sample Number	A2B48906	A2B54303	A2B60506	A2B65707	A2B66005
Sampling Date	11/18/2002	11/19/2002	11/20/2002	11/21/2002	11/21/2002
Matrix	WATER	WATER	WATER	WATER	WATER
Semivolatile Organic Compounds (ug/L)					
Bis(2-chloroethyl) ether	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
Bis(2-ethylhexyl) phthalate	0.90 U	0.90 U	0.36 BJ	0.90 U	0.90 U
Butyl benzyl phthalate	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Chrysene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Cresol, 4,6-Dinitro-O-	24 U	24 U	24 U	24 U	24 U
Cresol, p-Chloro-m-	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Dibenzo(a,h)anthracene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Diethyl phthalate	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Dimethyl phthalate	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Di-n-butyl phthalate	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Di-n-octyl phthalate	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Fluoranthene	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
Fluorene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobutadiene	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U
Hexachlorocyclopentadiene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloroethane	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Indeno(1,2,3-cd)pyrene	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U
Isophorone	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
Naphthalene	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Nitrobenzene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
N-Nitrosodimethylamine	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
N-Nitroso-Di-n-propylamine	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
N-nitrosodiphenylamine	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Pentachlorophenol	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
Phenanthrene	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U
Phenol	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
Pyrene	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U

Notes:
U - Compound was analyzed for, but not detected.
J - Estimated value.
B - Analyte was found in associated blank, as well as the sample.

Table 12
Summary of Analytical Results - Trip Blanks and Field Blanks
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Kin-Buc Landfill
Edison, New Jersey

Sample ID	FB111102	FB111202 RE	FB111302	FB111402	FB111502
Lab Sample Number	A2B16003	A2B24006RE	A2B33203	A2B40108	A2B43906
Sampling Date	11/11/2002	11/12/2002	11/13/2002	11/14/2002	11/15/2002
Matrix	WATER	WATER	WATER	WATER	WATER
Pesticides/PCBs (ug/L)					
4,4'-DDD	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
4,4'-DDE	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
4,4'-DDT	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Aldrin	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
alpha-BHC	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
beta-BHC	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Chlordane	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
delta-BHC	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Dieldrin	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Endosulfan I	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Endosulfan II	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Endosulfan Sulfate	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Endrin	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Endrin aldehyde	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
gamma-BHC (Lindane)	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Heptachlor	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Heptachlor epoxide	0.0050 U	0.0050 U	0.0050 U	0.050 U	0.050 U
Methoxychlor	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
PCB 1016	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
PCB 1221	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
PCB 1232	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
PCB 1242	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
PCB 1248	0.050 U	0.050 U	0.082	0.050 U	0.050 U
PCB 1254	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
PCB 1260	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Toxaphene					

Notes:
PCBs - Polychlorinated biphenyls
U - Compound was analyzed for, but not detected.
RE - Sample was reanalyzed by the laboratory

Table 12
Summary of Analytical Results - Trip Blanks and Field Blanks
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Kin-Buc Landfill
Edison, New Jersey

Sample ID	FB111802	FB111902	FB112002	FB112102	FB-SW-112102
Lab Sample Number	A2B48906	A2B54303	A2B60506	A2B65707	A2B66005
Sampling Date	11/18/2002	11/19/2002	11/20/2002	11/21/2002	11/21/2002
Matrix	WATER	WATER	WATER	WATER	WATER
Pesticides/PCBs (ug/L)					
4,4'-DDD	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
4,4'-DDE	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
4,4'-DDT	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Aldrin	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
alpha-BHC	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
beta-BHC	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Chlordane	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
delta-BHC	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Dieldrin	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Endosulfan I	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Endosulfan II	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Endosulfan Sulfate	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Endrin	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Endrin aldehyde	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
gamma-BHC (Lindane)	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Heptachlor	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Heptachlor epoxide	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Methoxychlor	0.050 U	0.050 U	0.050 U	0.050 U	0.051 U
PCB 1016	0.050 U	0.050 U	0.050 U	0.050 U	0.051 U
PCB 1221	0.050 U	0.050 U	0.050 U	0.050 U	0.051 U
PCB 1232	0.050 U	0.050 U	0.050 U	0.050 U	0.051 U
PCB 1242	0.050 U	0.050 U	0.050 U	0.050 U	0.051 U
PCB 1248	0.050 U	0.050 U	0.050 U	0.050 U	0.051 U
PCB 1254	0.050 U	0.050 U	0.050 U	0.050 U	0.051 U
PCB 1260	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Toxaphene					

Notes:
PCBs - Polychlorinated biphenyls
U - Compound was analyzed for, but not detected.

Table 12
Summary of Analytical Results - Trip Blanks and Field Blanks
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Edison, New Jersey

Sample ID	FB111102	FB111202	FB111202 RE	FB111202 RERE	FB111302
Lab Sample Number	A2B16003	A2B24006	A2B24006RE	A2B24006RA	A2B33203
Sampling Date	11/11/2002	11/12/2002	11/12/2002	11/12/2002	11/13/2002
Matrix	WATER	WATER	WATER	WATER	WATER
Metals (mg/L)					
Antimony, Dissolved	0.02 U	0.02 U	NR	NR	0.02 U
Arsenic, Dissolved	0.04 U	0.04 U	NR	NR	0.04 U
Barium, Dissolved	0.005 U	0.005 U	NR	NR	0.0083
Beryllium, Dissolved	0.0050 U	0.005 U	NR	NR	0.005 U
Cadmium, Dissolved	0.010 U	0.01 U	NR	NR	0.01 U
Lead, Dissolved	0.010 U	0.01 U	NR	NR	0.01 U
Manganese, Dissolved	0.015 U	0.015 U	NR	NR	0.015 U
Mercury, Dissolved	0.00020 U	0.00020 U	NR	NR	0.00020 U
Nickel, Dissolved	0.010 U	0.01 U	NR	NR	0.01 U
Vanadium, Dissolved	0.006 U	0.006 U	NR	NR	0.006 U
Zinc, Dissolved	0.050 U	0.05 U	NR	NR	0.05 U
General Chemistry (mg/L)					
Biochemical Oxygen Demand (BOD)	2.0 U	2.0 U	NR	NR	2.0 U
Chemical Oxygen Demand (COD)	5.0 U	5.0 U	NR	NR	8.4
Chloride	1.0 U	1.0 U	NR	NR	12.7
Cyanide, Total	0.020 U	0.010 U	NR	NR	0.010 U
Nitrogen, Nitrate	0.50 U	0.50 U	NR	NR	0.50 U
Phenolics, Total	0.0050 U	0.0050 U	NR	NR	0.012
Total Dissolved Solids (TDS)	10 U	41.0	10 U	10 U	5230
Total Organic Carbon (TOC)	1.0 U	1.0 U	NR	NR	1.0 U
Total Organic Halogen (TOX) (ug/L)	18.2	15.4	NR	NR	16.4
Natural Attenuation (ug/L)					
Ethane	4.0 U	4.0 U	NR	NR	4.0 U
Ethene	3.0 U	3.0 U	NR	NR	3.0 U
Methane	2.0 U	2.0 U	NR	NR	2.0 U

Notes:
U - Compound was analyzed for, but not detected.
NR - Compound was not analyzed.
RE - Sample was reanalyzed by the laboratory.

Table 12
Summary of Analytical Results - Trip Blanks and Field Blanks
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	FB111402	FB111402 RE	FB111502	FB111802	FB111902
Lab Sample Number	A2B40108	A2B40108RE	A2B43906	A2B48906	A2B54303
Sampling Date	11/14/2002	11/14/2002	11/15/2002	11/18/2002	11/19/2002
Matrix	WATER	WATER	WATER	WATER	WATER
Metals (mg/L)					
Antimony, Dissolved	0.020 U	NR	0.020 U	0.020 U	0.020 U
Arsenic, Dissolved	0.040 U	NR	0.040 U	0.040 U	0.040 U
Barium, Dissolved	0.0083	NR	0.0104	0.005 U	0.005 U
Beryllium, Dissolved	0.005 U	NR	0.005 U	0.005 U	0.005 U
Cadmium, Dissolved	0.010 U	NR	0.010 U	0.010 U	0.010 U
Lead, Dissolved	0.010 U	NR	0.010 U	0.010 U	0.010 U
Manganese, Dissolved	0.015 U	NR	0.0012 B	0.015 U	0.015 U
Mercury, Dissolved	0.00020 U	NR	0.00020 U	0.00020 U	0.00020 U
Nickel, Dissolved	0.010 U	NR	0.010 U	0.010 U	0.010 U
Vanadium, Dissolved	0.006 U	NR	0.006 U	0.006 U	0.006 U
Zinc, Dissolved	0.050 U	NR	0.050 U	0.050 U	0.050 U
General Chemistry (mg/L)					
Biochemical Oxygen Demand (BOD)	2.0 U	NR	2.0 U	2.0 U	2.0 U
Chemical Oxygen Demand (COD)	5.0 U	NR	5.0 U	5.0 U	13.6
Chloride	1.0 U	NR	1.0 U	1.0 U	1.0 U
Cyanide, Total	0.010 U	NR	0.010 U	0.010 U	0.010 U
Nitrogen, Nitrate	0.50 U	NR	0.50 U	0.50 U	0.50 U
Phenolics, Total	0.0050 U	NR	0.0058	0.0057	0.0050 U
Total Dissolved Solids (TDS)	186	61.0	10 U	10 U	100
Total Organic Carbon (TOC)	1.0 U	NR	1.0 U	1.0 U	1.0 U
Total Organic Halogen (TOX) (ug/L)	14.7	NR	17.4	12.2	10 U
Natural Attenuation (ug/L)					
Ethane	4.0 U	NR	4.0 U	4.0 U	4.0 U
Ethene	3.0 U	NR	3.0 U	3.0 U	3.0 U
Methane	2.0 U	NR	2.0 U	2.0 U	2.0 U

Notes:
U - Compound was analyzed for, but not detected.
NR - Compound was not analyzed.
B - Analyte was found in the associated blank, as well as the sample.
RE - Sample was reanalyzed by the laboratory.

Table 12
Summary of Analytical Results - Trip Blanks and Field Blanks
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	FB112002	FB112102	FB-SW-112102
Lab Sample Number	A2B60506	A2B65707	A2B66005
Sampling Date	11/20/2002	11/21/2002	11/21/2002
Matrix	WATER	WATER	WATER
Metals (mg/L)			
Antimony, Dissolved	0.02 U	0.020 U	0.020 U
Arsenic, Dissolved	0.04 U	0.040 U	0.040 U
Barium, Dissolved	0.005 U	0.005 U	0.005 U
Beryllium, Dissolved	0.005 U	0.005 U	0.005 U
Cadmium, Dissolved	0.01 U	0.010 U	0.010 U
Lead, Dissolved	0.01 U	0.010 U	0.010 U
Manganese, Dissolved	0.015 U	0.015 U	0.015 U
Mercury, Dissolved	0.00020 U	0.00020 U	0.00020 U
Nickel, Dissolved	0.01 U	0.010 U	0.010 U
Vanadium, Dissolved	0.006 U	0.006 U	0.006 U
Zinc, Dissolved	0.05 U	0.050 U	0.050 U
General Chemistry (mg/L)			
Biochemical Oxygen Demand (BOD)	2.0 U	2.0 U	2.0 U
Chemical Oxygen Demand (COD)	5.0 U	5.0 U	5.0 U
Chloride	280	1.0 U	1.0 U
Cyanide, Total	0.010 U	0.010 U	0.010 U
Nitrogen, Nitrate	0.50 U	0.50 U	0.50 U
Phenolics, Total	0.0050 U	0.0050 U	0.0050 U
Total Dissolved Solids (TDS)	1140	10 U	11.0
Total Organic Carbon (TOC)	1.0 U	1.0 U	1.0 U
Total Organic Halogen (TOX) (ug/L)	10 U	172	14.0
Natural Attenuation (ug/L)			
Ethane	4.0 U	4.0 U	4.0 U
Ethene	3.0 U	3.0 U	3.0 U
Methane	2.0 U	2.0 U	2.0 U

Notes:
U - Compound was analyzed for, but not detected.

Table 13
Summary of Analytical Results - Surface Water
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	SW-01	SW-02	SW-03	SW-04
Lab Sample Number	A2B66001	A2B66002	A2B66003	A2B66004
Sampling Date	11/21/2002	11/21/2002	11/21/2002	11/21/2002
Matrix	SURFACE WATER	SURFACE WATER	SURFACE WATER	SURFACE WATER
Volatile Organic Compounds (ug/L)				
1,1,1-Trichloroethane	4 U	4 U	4 U	4 U
1,1,2,2-Tetrachloroethane	7 U	7 U	7 U	7 U
1,1,2-Trichloroethane	5 U	5 U	5 U	5 U
1,1-Dichloroethane	5 U	5 U	5 U	5 U
1,1-Dichloroethene	3 U	3 U	3 U	3 U
1,2-Dichloroethane	5 U	5 U	5 U	5 U
1,2-Dichloroethene (Total)	5 U	5 U	5 U	5 U
1,2-Dichloropropane	6 U	6 U	6 U	6 U
2-Chloroethylvinyl ether	10 U	10 U	10 U	10 U
Acrolein	400 U	400 U	400 U	400 U
Acrylonitrile	400 U	400 U	400 U	400 U
Benzene	4 U	4 U	4 U	4 U
Bromoform	5 U	5 U	5 U	5 U
Bromomethane	10 U	10 U	10 U	10 U
Carbon Tetrachloride	3 U	3 U	3 U	3 U
Chlorobenzene	6 U	6 U	6 U	6 U
Chloroethane	10 U	10 U	10 U	10 U
Chloroform	2 U	2 U	2 U	2 U
Chloromethane	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	5 U	5 U	5 U	5 U
Dibromochloromethane	3 U	3 U	3 U	3 U
Dichlorobromomethane	2 U	2 U	2 U	2 U
Ethylbenzene	7 U	7 U	7 U	7 U
Methylene chloride	4 U	4 U	4 U	4 U
Tetrachloroethene	4 U	4 U	4 U	4 U
Toluene	6 U	6 U	6 U	6 U
trans-1,3-Dichloropropene	5 U	5 U	5 U	5 U
Trichloroethene	2 U	2 U	2 U	2 U
Vinyl chloride	10 U	10 U	10 U	10 U

Notes:
U - Compound was analyzed for, but not detected.

Table 13
Summary of Analytical Results - Surface Water
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

Sample ID	SW-01	SW-02	SW-03	SW-04
Lab Sample Number	A2B66001	A2B66002	A2B66003	A2B66004
Sampling Date	11/21/2002	11/21/2002	11/21/2002	11/21/2002
Matrix	SURFACE WATER	SURFACE WATER	SURFACE WATER	SURFACE WATER
Semivolatile Organic Compounds (ug/L)				
1,2,4-Trichlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U
1,2-Dichlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U
1,2-Diphenylhydrazine	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U
1,4-Dichlorobenzene	4.4 U	4.4 U	4.4 U	4.4 U
2,2'-Oxybis(1-Chloropropane)	5.7 U	5.7 U	5.7 U	5.7 U
2,4,6-Trichlorophenol	2.7 U	2.7 U	2.7 U	2.7 U
2,4-Dichlorophenol	2.7 U	2.7 U	2.7 U	2.7 U
2,4-Dimethylphenol	2.7 U	2.7 U	2.7 U	2.7 U
2,4-Dinitrophenol	42 U	42 U	42 U	42 U
2,4-Dinitrotoluene	5.7 U	5.7 U	5.7 U	5.7 U
2,6-Dinitrotoluene	1.9 U	1.9 U	1.9 U	1.9 U
2-Chloronaphthalene	1.9 U	1.9 U	1.9 U	1.9 U
2-Chlorophenol	3.3 U	3.3 U	3.3 U	3.3 U
2-Nitrophenol	3.6 U	3.6 U	3.6 U	3.6 U
3,3'-Dichlorobenzidine	16 U	16 U	16 U	16 U
4-Bromophenyl phenyl ether	1.9 U	1.9 U	1.9 U	1.9 U
4-Chlorophenyl phenyl ether	1.0 U	1.0 U	1.0 U	1.0 U
4-Nitrophenol	2.4 U	2.4 U	2.4 U	2.4 U
Acenaphthene	1.9 U	1.9 U	1.9 U	1.9 U
Acenaphthylene	3.5 U	3.5 U	3.5 U	3.5 U
Anthracene	1.9 U	1.9 U	1.9 U	1.9 U
Benzidine	44 U	44 U	44 U	44 U
Benzo(a)anthracene	7.8 U	7.8 U	7.8 U	7.8 U
Benzo(a)pyrene	2.5 U	2.5 U	2.5 U	2.5 U
Benzo(b)fluoranthene	4.8 U	4.8 U	4.8 U	4.8 U
Benzo(ghi)perylene	4.1 U	4.1 U	4.1 U	4.1 U
Benzo(k)fluoranthene	2.5 U	2.5 U	2.5 U	2.5 U
Bis(2-chloroethoxy) methane	5.3 U	5.3 U	5.3 U	5.3 U

Notes:
U - Compound was analyzed for, but not detected.

Table 13
Summary of Analytical Results - Surface Water
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Kin-Buc Landfill
Edison, New Jersey

Sample ID	SW-01	SW-02	SW-03	SW-04
Lab Sample Number	A2B66001	A2B66002	A2B66003	A2B66004
Sampling Date	11/21/2002	11/21/2002	11/21/2002	11/21/2002
Matrix	SURFACE WATER	SURFACE WATER	SURFACE WATER	SURFACE WATER
Semivolatile Organic Compounds (ug/L)				
Bis(2-chloroethyl) ether	5.7 U	5.7 U	5.7 U	5.7 U
Bis(2-ethylhexyl) phthalate	0.90 U	0.90 U	0.90 U	0.90 U
Butyl benzyl phthalate	2.5 U	2.5 U	2.5 U	2.5 U
Chrysene	2.5 U	2.5 U	2.5 U	2.5 U
Cresol, 4,6-Dinitro-O-	24 U	24 U	24 U	24 U
Cresol, p-Chloro-m-	3.0 U	3.0 U	3.0 U	3.0 U
Dibenzo(a,h)anthracene	2.5 U	2.5 U	2.5 U	2.5 U
Diethyl phthalate	1.9 U	1.9 U	1.9 U	1.9 U
Dimethyl phthalate	1.6 U	1.6 U	1.6 U	1.6 U
Di-n-butyl phthalate	2.5 U	2.5 U	2.5 U	2.5 U
Di-n-octyl phthalate	2.5 U	2.5 U	2.5 U	0.42 J
Fluoranthene	2.2 U	2.2 U	2.2 U	2.2 U
Fluorene	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobenzene	1.9 U	1.9 U	1.9 U	1.9 U
Hexachlorobutadiene	0.90 U	0.90 U	0.90 U	0.90 U
Hexachlorocyclopentadiene	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloroethane	1.6 U	1.6 U	1.6 U	1.6 U
Indeno(1,2,3-cd)pyrene	3.7 U	3.7 U	3.7 U	3.7 U
Isophorone	2.2 U	2.2 U	2.2 U	2.2 U
Naphthalene	1.6 U	1.6 U	1.6 U	1.6 U
Nitrobenzene	1.9 U	1.9 U	1.9 U	1.9 U
N-Nitrosodimethylamine	2.2 U	2.2 U	2.2 U	2.2 U
N-Nitroso-Di-n-propylamine	3.3 U	3.3 U	3.3 U	3.3 U
N-nitrosodiphenylamine	1.9 U	1.9 U	1.9 U	1.9 U
Pentachlorophenol	3.6 U	3.6 U	3.6 U	3.6 U
Phenanthrene	5.4 U	5.4 U	5.4 U	5.4 U
Phenol	1.5 U	1.5 U	1.5 U	1.5 U
Pyrene	1.9 U	1.9 U	1.9 U	1.9 U

Notes:
U - Compound was analyzed for, but not detected.
J - Estimated value.

Table 13
Summary of Analytical Results - Surface Water
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Kin-Buc Landfill
Edison, New Jersey

Sample ID	SW-01	SW-02	SW-03	SW-04
Lab Sample Number	A2B66001	A2B66002	A2B66003	A2B66004
Sampling Date	11/21/2002	11/21/2002	11/21/2002	11/21/2002
Matrix	SURFACE WATER	SURFACE WATER	SURFACE WATER	SURFACE WATER
Pesticides/PCBs (ug/L)				
4,4'-DDD	0.0050 U	0.0050 U	0.0050 U	0.0050 U
4,4'-DDE	0.0050 U	0.0050 U	0.0050 U	0.0050 U
4,4'-DDT	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Aldrin	0.0050 U	0.0050 U	0.0050 U	0.0050 U
alpha-BHC	0.0050 U	0.0050 U	0.0050 U	0.0050 U
beta-BHC	0.050 U	0.050 U	0.050 U	0.050 U
Chlordane	0.017	0.0050 U	0.0050 U	0.0050 U
delta-BHC	0.0052	0.0050 U	0.0050 U	0.0050 U
Dieldrin	0.013	0.0048 J	0.0050 U	0.0050 U
Endosulfan I	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Endosulfan II	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Endosulfan Sulfate	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Endrin	0.0050 U	0.0050 U	0.0058	0.0049 J
Endrin aldehyde	0.0050 U	0.0050 U	0.0050 U	0.0050 U
gamma-BHC (Lindane)	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Heptachlor	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Heptachlor epoxide	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Methoxychlor	0.050 U	0.050 U	0.061 U	0.052 U
PCB 1016	0.050 U	0.050 U	0.061 U	0.052 U
PCB 1221	0.050 U	0.050 U	0.061 U	0.052 U
PCB 1232	0.050 U	0.050 U	0.061 U	0.052 U
PCB 1242	0.050 U	0.050 U	0.061 U	0.052 U
PCB 1248	0.050 U	0.050 U	0.061 U	0.052 U
PCB 1254	0.050 U	0.050 U	0.061 U	0.052 U
PCB 1260	0.10 U	0.10 U	0.10 U	0.10 U
Toxaphene				

Notes:
PCBs - Polychlorinated biphenyls
U - Compound was analyzed for, but not detected.
J - Estimated value.

Table 13
Summary of Analytical Results - Surface Water
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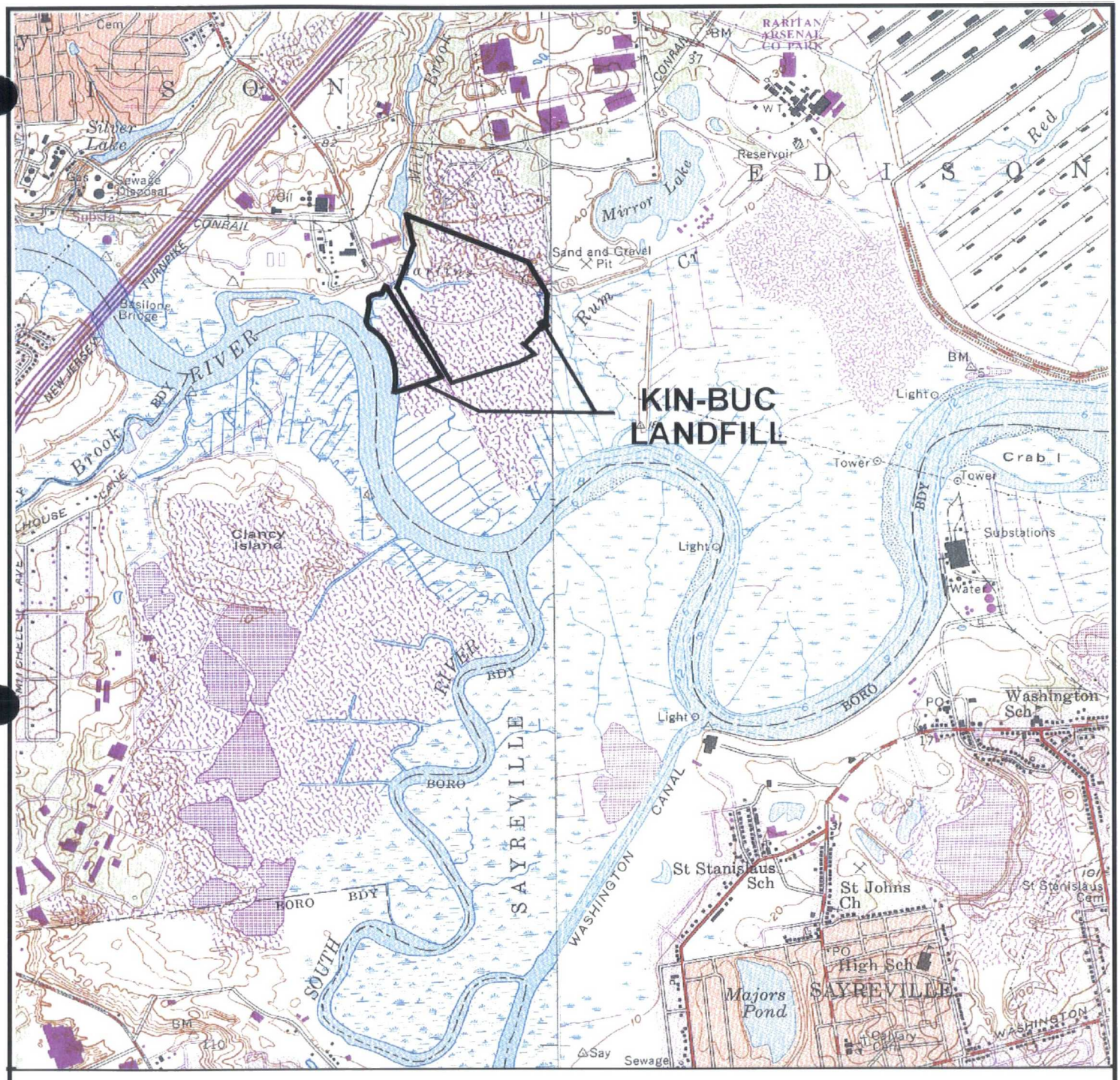
Kin-Buc Landfill
Edison, New Jersey

Sample ID	SW-01	SW-02	SW-03	SW-04
Lab Sample Number	A2B66501	A2B66502	A2B66503	A2B66504
Sampling Date	11/21/2002	11/21/2002	11/21/2002	11/21/2002
Matrix	SURFACE WATER	SURFACE WATER	SURFACE WATER	SURFACE WATER
Metals (mg/L)				
Antimony, Total	0.10 U	0.010 U	0.10 U	0.10 U
Arsenic, Total	0.20 U	0.20 U	0.20 U	0.20 U
Barium, Total	0.11	0.067	0.053	0.048
Beryllium, Total	0.025 U	0.025 U	0.025 U	0.025 U
Cadmium, Total	0.050 U	0.050 U	0.050 U	0.050 U
Lead, Total	0.050 U	0.050 U	0.050 U	0.050 U
Manganese, Total	0.25	0.11	0.067 B	0.070 B
Mercury, Total	0.00020 U	0.00020 U	0.00020 U	0.00020 U
Nickel, Total	0.050 U	0.050 U	0.050 U	0.050 U
Vanadium, Total	0.030 U	0.030 U	0.030 U	0.030 U
Zinc, Total	0.25 U	0.25 U	0.25 U	0.25 U
General Chemistry (mg/L)				
Biochemical Oxygen Demand (BOD)	2.0 U	2.0 U	2.0 U	2.0 U
Chemical Oxygen Demand (COD)	8.1	6.1	5.8	10.4
Chloride	96.7	46.1	29.9	36.1
Cyanide, Total	0.010 U	0.010 U	0.010 U	0.010 U
Nitrogen, Nitrate	1.8	1.8	1.7	1.6
Phenolics, Total	0.0071	0.0050 U	0.0098	0.0069
Total Dissolved Solids (TDS)	345	212	116	131
Total Organic Carbon (TOC)	3.1	3.9	4.1	4.2
Total Organic Halogen (TOX) (ug/L)	31.1	69.0	19.4	45.8
Natural Attenuation (ug/L)				
Ethane	4.0 U	4.0 U	4.0 U	4.0 U
Ethene	3.0 U	3.0 U	3.0 U	3.0 U
Methane	7.3	4.7	2.2	2.0 U

Notes:
U - Compound was analyzed for, but not detected.
B - Value is greater than or equal to the instrument detection limit, but less than the quantitation limit.

Table 14
Surface-Water Quality Parameters
Fourth Quarter/Annual Monitoring Report
Kin-Buc Landfill
Edison, New Jersey

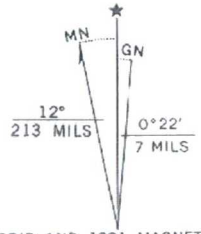
Surface-Water Sample Location	pH (Standand Unit)	Temperature (degrees Celsius)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
SW-01	6.91	9.4	0.479	4.46	19
SW-02	6.80	8.7	0.346	4.86	39
SW-03	6.62	8.0	0.222	4.82	47
SW-04	6.59	8.1	0.241	4.72	50



SOURCE:

SOUTH AMBOY/NEW BRUNSWICK, NEW JERSEY
7.5 MINUTE QUADRANGLE
CONTOUR INTERVAL = 10 FEET

QUADRANGLE LOCATION



UTM GRID AND 1981 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

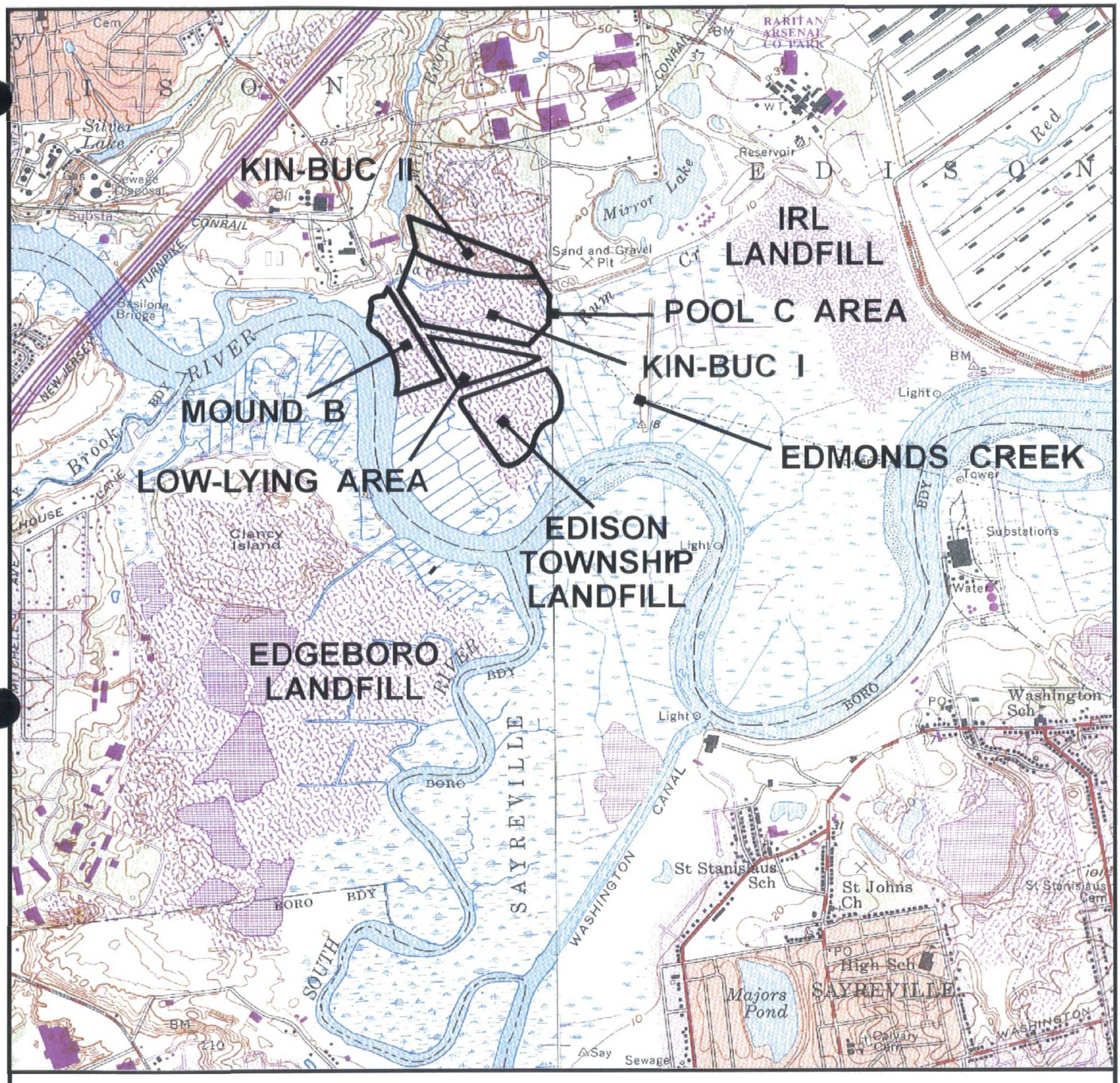
01/28/03 CRA-54-TLF
23796005/23796B01.CDR

SCA SERVICES, INC.
KIN-BUC LANDFILL SITE
EDISON, NEW JERSEY
FOURTH QUARTER/ANNUAL MONITORING REPORT

SITE LOCATION

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

FIGURE 1



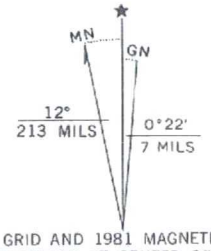
SOURCE:

SOUTH AMBOY/NEW BRUNSWICK, NEW JERSEY
7.5 MINUTE QUADRANGLE
CONTOUR INTERVAL = 10 FEET

2000' 0 2000'

Approximate Scale: In Feet

QUADRANGLE LOCATION



UTM GRID AND 1981 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

01/30/03 CRA-54-TLF
23796005/23796B02.CDR

SCA SERVICES, INC.
KIN-BUC LANDFILL SITE
EDISON, NEW JERSEY

FOURTH QUARTER/ANNUAL MONITORING REPORT

SITE AND SURROUNDING AREA

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

FIGURE 2

LEGEND

- MONITORING WELL LOCATION
- SAND AND GRAVEL PUMPING WELL LOCATION
- GAS MIGRATION WELL LOCATION
- OU2 UPGRADIENT MONITORING BEDROCK WELL LOCATION (APPROXIMATE)
- LEACHATE PUMP STATION LOCATION (APPROXIMATE)

SOURCES:

1. BASEMAP CREATED FROM EMCON/OWT, INC. DRAWING No. 1, TITLED: "OPERABLE UNIT 1 MONITORING NETWORK" PROJECT No. 01862-025.000, LAST REVISED: 2/99.
2. LEACHATE PUMP STATION LOCATIONS #1 THROUGH #4 TAKEN FROM WEHRAN ENVIROTECH FIGURE 2-2, TITLED: "NWI DESIGNATED WETLANDS", PROJECT No. 09464, AND ARE APPROXIMATE.

0 150' 300'
GRAPHIC SCALE

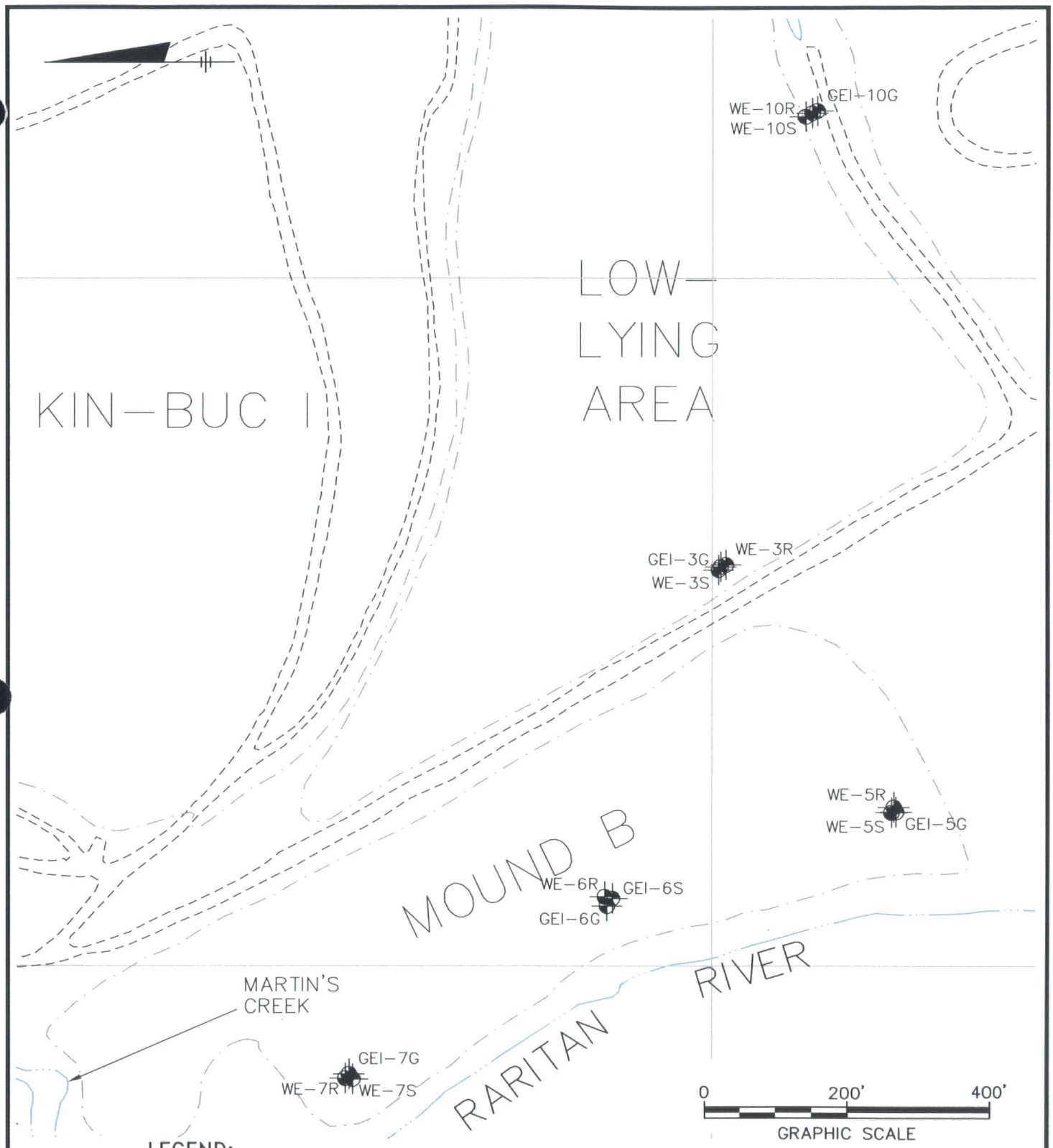
SCA SERVICES, INC.
KIN-BUC LANDFILL SITE
EDISON, NEW JERSEY
FOURTH QUARTER/ANNUAL MONITORING REPORT

OPERABLE UNIT 1 GROUNDWATER MONITORING LOCATIONS

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

FIGURE 3

X:
L: OFF=REF*
P: PAGESET/PLT-DL
01/28/03 CRA-54-TLF
23796005/23796G01.DWG



LEGEND:

⊕ MONITORING WELL LOCATION

SOURCE:

BASEMAP CREATED FROM EMCON DRAWING TITLED: "OU2 GROUNDWATER MONITORING LOCATIONS", FIGURE 1-1, PROJECT No. 12568-001.000, DATED: 8/7/96.

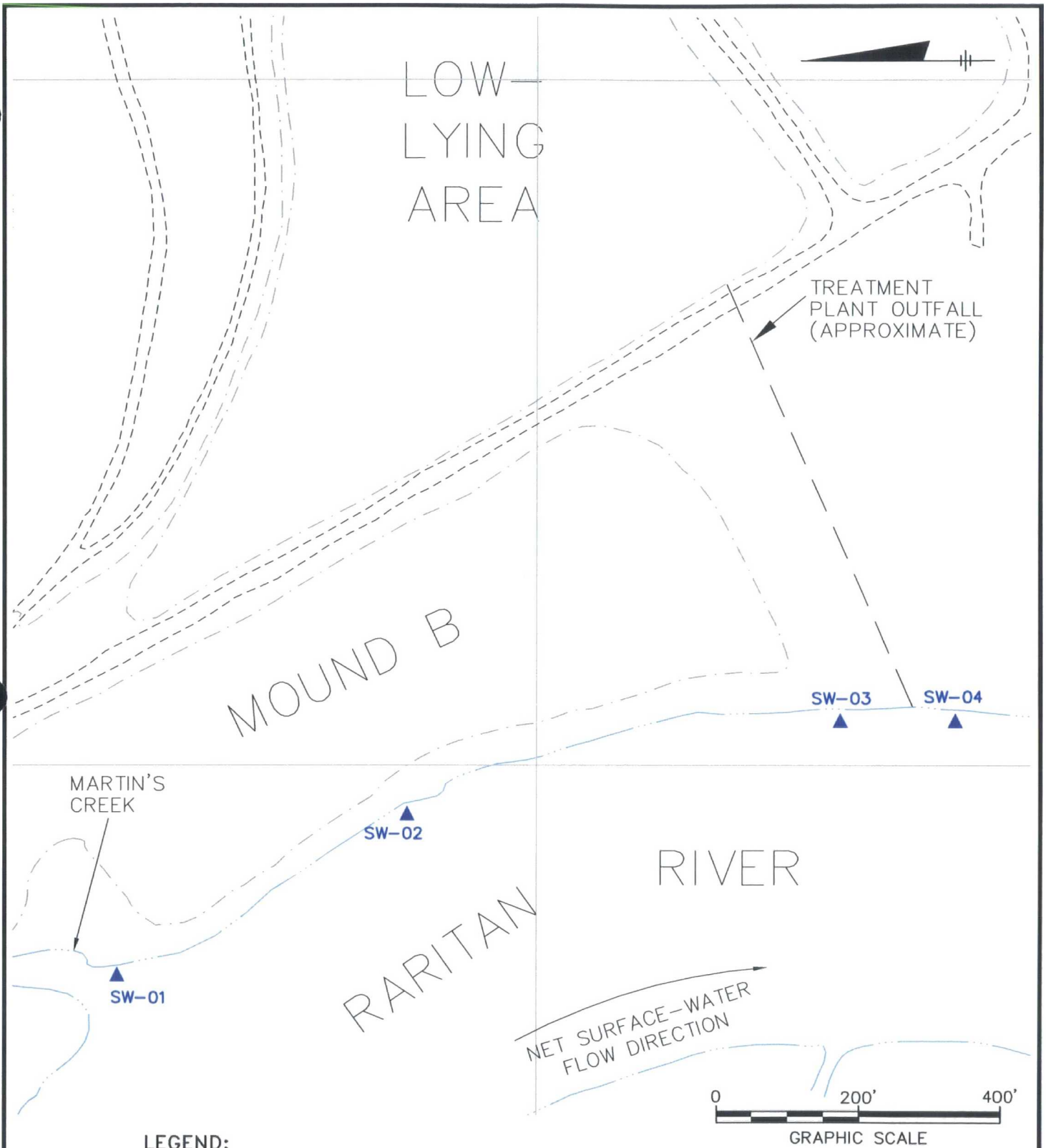
X: 23796X01.DWG
L: OFF=REF*
P: PAGESET/PLT-AP
01/30/03 CRA-54-TLF
23796005/23796G02.DWG

SCA SERVICES, INC.
KIN-BUC LANDFILL SITE
EDISON, NEW JERSEY
FOURTH QUARTER/ANNUAL MONITORING REPORT

OPERABLE UNIT 2 GROUNDWATER MONITORING LOCATIONS

BBL® BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 4



LEGEND:

▲ SURFACE-WATER SAMPLE LOCATION (APPROXIMATE)

SOURCE:

BASEMAP CREATED FROM EMCON DRAWING TITLED: "OU2 SURFACE WATER MONITORING LOCATIONS", FIGURE 1-2, PROJECT No. 12568-001.000, DATED: 8/7/96.

X: 23796X01.DWG
L: OFF=REF*
P: PAGESET/PLT-AP
01/28/03 CRA-54-TLF
23796005/23796G03.DWG

SCA SERVICES, INC.
KIN-BUC LANDFILL SITE
EDISON, NEW JERSEY
FOURTH QUARTER/ANNUAL MONITORING REPORT

SURFACE-WATER SAMPLE LOCATIONS

BBL® BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 5

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter/ Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.

Dates: 11/11/02 to 11/21/02

Well ID	W-1R	W-2R	W-2G	W-9R	W-10R	W-10G	W-8S	W-8RR	W-7R	W-6S
Alkalinity mg/L	>400	>400	No Sample	160	40	5	>400	>400	>400	>400
Ferrous Iron mg/L	4.8	6.4	No Sample	2.8	2.4	1.8	2.5	2.6	0.4	2.3
Sulfate mg/L	>70	>70	No Sample	>70	33	>70	>70	>70	<0	>70
Sulfide mg/L	0.069	0.085	No Sample	-0.037	-0.001	0.045	0.050	0.006	>0.600	0.012

Well ID	W-6G	W-6R	W-5R	W-4R	W-4S	W-3S	W-3RR	DUP-01	W-4G	W-13G
Alkalinity mg/L	>400	>400	>400	400	>400	>400	380	400	>400	>400
Ferrous Iron mg/L	3.0	0.1	2.6	1.9	2.5	2.8	3.2	3.5	1.6	2.0
Sulfate mg/L	<0	<0	>70	4	<0	<0	36	35	<0	<0
Sulfide mg/L	0.059	>0.600	0.012	-0.042	0.009	0.013	0.146	0.138	0.026	0.051

Well ID	W-13S	WE-114DR	W-15G	WE-3R	WE-3S	GEI-5G	WE-5S	GEI-6G	WE-6R	GEI-6S
Alkalinity mg/L	>400	120	No Sample	>400	>400	>400	>400	>400	>400	>400
Ferrous Iron mg/L	2.5	2.6	No Sample	3.0	2.2	2.2	2.4	1.5	3.4	1.5
Sulfate mg/L	>70	>70	No Sample	>70	>70	<0	<0	<0	>70	<0
Sulfide mg/L	0.051	0.013	No Sample	0.011	0.065	0.022	0.073	0.042	0.011	0.032

Well ID	WE-7S	WE-7R	GEI-10G	DUP-02	WE-10R	WE-10S	WE-8R	GEI-8G	GEI-7G	
Alkalinity mg/L	>400	260	>400	>400	>400	>400	>400	>400	No Sample	
Ferrous Iron mg/L	2.3	2.3	2.5	2.5	2.8	2.2	3.0	2.0	No Sample	
Sulfate mg/L	<0	>70	<0	<0	>70	>70	62	0	No Sample	
Sulfide mg/L	0.039	0.017	0.028	0.027	0.019	0.011	0.032	0.080	No Sample	

Comments:

The detectable range limits for all parameters are as follows: Ferrous Iron 0.0 - 10.0 mg/L, using HACH Model 1R-18C;
Alkalinity (High Range) 20 - 400 mg/L, (Low Range) 5 - 100 mg/L, using HACH Model AL-AP MG-L;
Sulfate 0 - 70 mg/L and Sulfide 0 - 0.600 mg/L, using HACH Model DR/ 2010 Spectrophotometer.
DUP-01 is a duplicate sample of W-3RR.
DUP-02 is a duplicate sample of GEI-10G.

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/11/2002
Weather: Cloudy Lt. Rain 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: W1R
Total Well Depth (ft.): 35.25
Screen Interval (ft.): 30.26-35.26

Pre-pumping water level from TOC (ft.): 20.00
Pump Depth (ft.): 32.70
Purge Method: Bladder Pump

Purge Times(on/off): 10:28-10:50
Total Vol. Purged (L): 2.65
Sample Time: 10:51

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
10:31	0.13	5.27	17.0	11170	2.55	-85	43.60	20.30	Blackish w/ odor
10:34	0.13	5.43	17.0	10570	2.33	-72	45.70	20.91	Blackish w/ odor, reduced flow rate.
10:37	0.11	5.43	17.0	10000	2.37	-64	47.60	21.14	Blackish w/ odor
10:40	0.10	5.52	17.1	10070	2.26	-53	39.30	21.31	Blackish w/ odor
10:43	0.10	5.57	17.2	9630	2.24	-51	40.00	21.49	Blackish w/ odor
10:47	0.10	5.58	17.2	9440	2.10	-47	40.30	21.62	Blackish w/ odor
10:50	0.10	5.58	17.2	9440	2.07	-43	40.60	21.75	Blackish w/ odor

Definition: TOC - Top of inner casing

Comments: Water level continued to drop despite efforts to reduce flow rate. Client advised to sample once all field parameters stabilized.

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/11/2002
Weather: Cloudy Lt. Rain 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: W2R
Total Well Depth (ft.): 35.16
Screen Interval (ft.): 30.16-35.16

Pre-pumping water level from TOC (ft.): 22.74
Pump Depth (ft.): 32.70
Purge Method: Bladder Pump

Purge Times(on/off): 12:55-13:34
Total Vol. Purged (L): 4.15
Sample Time: 13:35

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp.(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
12:58	0.21	5.02	16.6	8140	1.94	-75	22.00	23.24	Blackish w/ odor, reduced flow rate.
13:01	0.10	5.10	16.6	8290	1.88	-77	14.30	23.24	Blackish w/ odor
13:04	0.10	5.32	17.0	8340	1.85	-82	11.00	23.24	Blackish w/ odor
13:07	0.10	5.37	17.0	8450	1.72	-84	9.23	23.25	Blackish w/ odor
13:10	0.10	5.40	17.1	8590	1.53	-86	8.74	23.25	Blackish w/ odor
13:13	0.10	5.44	17.1	8770	1.47	-88	8.60	23.30	Blackish w/ odor
13:16	0.10	5.47	17.1	8940	1.27	-101	8.60	23.31	Blackish w/ odor
13:19	0.10	5.49	17.0	9090	1.01	-108	5.87	23.37	Blackish w/ odor
13:22	0.10	5.50	17.0	9220	0.92	-109	5.13	23.40	Blackish w/ odor
13:25	0.10	5.50	17.0	9300	0.76	-110	4.47	23.45	Blackish w/ odor
13:28	0.10	5.51	16.9	9410	0.64	-112	4.30	23.45	Blackish w/ odor
13:31	0.10	5.51	16.8	9450	0.61	-111	4.28	23.47	Blackish w/ odor
13:34	0.10	5.52	16.7	9510	0.62	-112	4.17	23.54	Blackish w/ odor

Definition: TOC - Top of inner casing

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/12/2002
Weather: Cloudy, rainy 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: W9R
Total Well Depth (ft.): 38.91
Screen Interval (ft.): 33.91-38.91

Pre-pumping water level from TOC (ft.): 21.06
Pump Depth (ft.): 35.90
Purge Method: Bladder Pump

Purge Times(on/off): 8:25-9:01
Total Vol. Purged (L): 3.7
Sample Time: 9:02

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
8:28	0.09	5.07	16.2	887	3.49	-19	9.90	21.45	Clear w/ odor
8:31	0.09	5.08	16.2	884	2.61	-31	9.96	21.54	Clear w/ odor
8:34	0.09	5.23	16.2	881	2.53	-41	9.53	21.67	Clear w/ odor
8:37	0.09	5.36	16.1	877	2.06	-47	8.98	21.81	Clear w/ odor
8:40	0.09	5.47	16.0	873	1.79	-55	9.08	21.85	Clear w/ odor
8:43	0.09	5.46	16.0	871	1.74	-62	8.90	21.93	Clear w/ odor
8:46	0.09	5.50	16.0	869	1.63	-67	9.46	22.00	Clear w/ odor
8:49	0.09	5.63	16.0	867	1.41	-73	9.88	22.13	Clear w/ odor
8:52	0.09	5.70	16.0	862	1.39	-79	11.90	22.18	Clear w/ odor
8:55	0.09	5.75	15.8	861	1.23	-82	12.10	22.27	Clear w/ odor
8:58	0.09	5.73	15.9	857	1.17	-86	11.80	22.30	Clear w/ odor
9:01	0.09	5.81	15.9	855	1.14	-91	11.50	22.33	Clear w/ odor

Definition: TOC - Top of inner casing

Comments: Water level continued to drop despite efforts to reduce purge rate. Client advised to sample once all field parameters had stabilized.

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/12/2002
Weather: Cloudy, rainy 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: W10R
Total Well Depth (ft.): 33.81
Screen Interval (ft.): 28.81-33.81

Pre-pumping water level from TOC (ft.): 18.28
Pump Depth (ft.): 31.30
Purge Method: Bladder Pump

Purge Times(on/off): 10:05-10:38
Total Vol. Purged (L): 3.5
Sample Time: 10:39

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
10:08	0.10	7.01	16.1	355	4.22	-50	7.47	18.98	Clear, slight odor
10:11	0.10	6.84	16.1	277	3.22	-40	2.89	19.69	Clear, slight odor
10:14	0.10	6.78	16.2	233	2.57	-44	2.66	19.89	Clear, slight odor
10:17	0.10	6.81	16.2	206	1.91	-48	2.23	20.22	Clear, slight odor
10:20	0.10	6.80	16.3	198	1.43	-36	2.20	20.62	Clear, slight odor
10:23	0.10	6.82	16.4	188	1.14	-41	2.29	20.86	Clear, slight odor
10:26	0.10	6.80	16.4	185	1.05	-40	2.31	21.16	Clear, slight odor
10:29	0.10	6.78	16.5	183	0.91	-45	2.21	21.34	Clear, slight odor
10:32	0.10	6.77	16.4	181	0.86	-52	2.10	21.53	Clear, slight odor
10:35	0.10	6.78	16.4	178	0.81	-53	2.36	21.65	Clear, slight odor
10:38	0.10	6.78	16.4	177	0.80	-55	2.14	21.88	Clear, slight odor

Definition: TOC - Top of inner casing

Comments: Water level continued to drop despite efforts to reduce purge rate. Client advised to sample once all field parameters had stabilized.

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/12/2002
Weather: Cloudy, rainy 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: W10G
Total Well Depth (ft.): 22.16
Screen Interval (ft.): 12.16-22.16

Pre-pumping water level from TOC (ft.): 18.64
Pump Depth (ft.): 20.40
Purge Method: Peristaltic pump

Purge Times(on/off): 11:26-11:53
Total Vol. Purged (L): 3.6
Sample Time: 11:54

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp.(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
11:29	0.15	3.77	18.1	488	1.88	375	5.29	19.06	Clear no odor noted
11:32	0.15	3.75	18.3	485	2.75	393	3.68	19.32	Clear no odor noted
11:35	0.15	3.88	18.3	478	1.71	401	1.14	19.68	Clear no odor noted
11:38	0.15	3.96	18.1	479	1.48	363	0.48	20.10	Clear no odor noted
11:41	0.15	4.11	17.9	465	1.03	327	0.36	20.39	Clear no odor noted
11:44	0.15	4.17	17.7	482	0.96	318	0.32	20.54	Clear no odor noted
11:47	0.15	4.21	17.7	465	0.90	316	0.29	20.71	Clear no odor noted
11:50	0.15	4.25	17.5	471	0.88	310	0.28	20.88	Clear no odor noted
11:53	0.15	4.30	17.6	468	0.86	307	0.29	20.98	Clear no odor noted

Definition: TOC - Top of inner casing

Comments: Water level continued to drop despite efforts to reduce purge rate. Client advised to sample once all field parameters had stabilized. Well purged dry before sampling was completed (collected vials/VOAs, TOC, RSK and 1- liter amber/BN). Collected 2nd BN bottle at end of day. Additional parameters collected on 11/13/02, 11/14/02, 11/15/02, 11/18/02 and 12/5/02.

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/12/2002
Weather: Cloudy, rainy 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: W8S
Total Well Depth (ft.): 15.21
Screen Interval (ft.): 10.21-15.21

Pre-pumping water level from TOC (ft.): 7.82
Pump Depth (ft.): 12.70
Purge Method: Bladder Pump

Purge Times(on/off): 13:30-14:18
Total Vol. Purged (L): 10.5
Sample Time: 14:19

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
13:33	0.21	7.96	17.6	17420	1.97	31	6.08	7.86	Clear, no odor
13:36	0.21	7.57	17.4	17400	1.77	-101	4.45	7.84	Clear, no odor
13:39	0.21	7.53	17.0	17290	1.42	-124	1.33	7.84	Clear, no odor
13:42	0.21	7.53	17.0	17210	1.16	-144	1.00	7.84	Clear, no odor
13:45	0.21	7.50	16.8	17120	0.81	-150	0.79	7.84	Clear, no odor
13:48	0.21	7.10	16.6	17010	0.58	-144	0.51	7.84	Clear, no odor
13:51	0.21	7.00	16.4	17060	0.53	-151	0.47	7.84	Clear, no odor
13:54	0.21	6.91	16.3	17100	0.48	-130	0.30	7.84	Clear, no odor
13:57	0.21	6.87	16.3	17150	0.48	-143	0.21	7.84	Clear, no odor
14:00	0.21	6.84	16.2	17140	0.44	-145	0.23	7.84	Clear, no odor
14:03	0.21	6.83	16.1	17150	0.42	-157	0.25	7.84	Clear, no odor
14:06	0.21	6.81	16.1	17220	0.40	-157	0.26	7.84	Clear, no odor
14:09	0.21	6.81	16.0	17260	0.36	-166	0.20	7.84	Clear, no odor
14:12	0.21	6.80	16.0	17280	0.35	-171	0.21	7.84	Clear, no odor
14:15	0.21	6.80	16.0	17290	0.32	-172	0.22	7.84	Clear, no odor
14:18	0.21	6.80	16.0	17330	0.32	-179	0.20	7.84	Clear, no odor

Definition: TOC - Top of inner casing

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/12/2002
Weather: Cloudy, rainy 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: W8RR
Total Well Depth (ft.): 41.24
Screen Interval (ft.): 36.24-41.24

Pre-pumping water level from TOC (ft.): 6.31
Pump Depth (ft.): 38.70
Purge Method: Bladder Pump

Purge Times(on/off): 14:54-15:27
Total Vol. Purged (L): 7.25
Sample Time: 15:28

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
14:57	0.24	7.05	17.5	12030	3.65	-142	5.49	6.52	Clear, slight odor
15:00	0.24	7.37	15.6	13340	3.50	-149	7.56	6.62	Clear, slight odor
15:03	0.24	7.53	15.3	14120	3.36	-188	7.98	6.67	Clear, slight odor
15:06	0.24	7.57	15.4	14180	2.31	-191	7.60	6.67	Clear, slight odor
15:09	0.24	7.61	15.3	14360	1.63	-193	6.23	6.67	Clear, slight odor
15:12	0.24	7.62	15.2	14300	1.22	-191	3.68	6.67	Clear, slight odor
15:15	0.24	7.62	15.2	14400	0.91	-189	2.54	6.67	Clear, slight odor
15:18	0.24	7.64	15.2	14470	0.88	-190	1.93	6.67	Clear, slight odor
15:21	0.24	7.65	15.3	14490	0.84	-194	1.94	6.67	Clear, slight odor
15:24	0.24	7.66	15.3	14450	0.78	-195	1.81	6.67	Clear, slight odor
15:27	0.24	7.66	15.3	14340	0.74	-187	1.95	6.67	Clear, slight odor

Definition: TOC - Top of inner casing

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/13/2002
Weather: Cloudy, Lt. rain 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: W7R
Total Well Depth (ft.): 20.08
Screen Interval (ft.): 15.08-20.08

Pre-pumping water level from TOC (ft.): 9.50
Pump Depth (ft.): 17.80
Purge Method: Bladder Pump

Purge Times(on/off): 8:37-9:22
Total Vol. Purged (L): 7.7
Sample Time: 9:23

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
8:40	0.48	5.64	17.4	5250	1.92	-81	5.65	10.44	Clear w/ moderate odor
8:43	0.19	5.72	17.3	5350	1.82	-88	5.69	10.27	Clear w/ moderate odor
8:46	0.19	6.01	16.9	5360	1.60	-121	6.38	10.27	Clear w/ moderate odor
8:49	0.19	6.51	16.7	5950	1.15	-167	7.71	10.27	Slightly turbid (blackish) w/ odor
8:52	0.19	6.58	16.5	6980	0.73	-210	9.58	10.27	Slightly turbid (blackish) w/ odor
8:55	0.19	6.70	16.3	7410	0.54	-236	5.27	10.23	Slightly turbid (blackish) w/ odor
8:58	0.19	6.73	16.2	7490	0.53	-242	2.98	10.17	Clearer w/ some odor
9:01	0.19	6.78	16.2	7520	0.49	-253	2.02	10.17	Clear w/ moderate odor
9:04	0.19	6.87	16.2	7550	0.48	-254	1.61	10.17	Clear w/ moderate odor
9:07	0.19	6.98	16.1	7530	0.45	-262	1.55	10.18	Clear w/ moderate odor
9:10	0.19	6.89	16.1	7510	0.41	-266	1.36	10.18	Clear w/ moderate odor
9:13	0.19	6.96	16.1	7480	0.38	-270	1.41	10.21	Clear w/ moderate odor
9:16	0.19	6.96	16.0	7460	0.34	-276	1.27	10.22	Clear w/ moderate odor
9:19	0.19	6.97	16.0	7460	0.33	-277	1.21	10.22	Clear w/ moderate odor
9:22	0.19	6.99	16.0	7420	0.32	-281	1.29	10.22	Clear w/ moderate odor

Definition: TOC - Top of inner casing

Comments: Purge rate was reduced to minimize well draw down.

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/13/2002
Weather: Cloudy, Lt. rain 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: W6S
Total Well Depth (ft.): 35.00
Screen Interval (ft.): 30.00-35.00

Pre-pumping water level from TOC (ft.): 22.42
Pump Depth (ft.): 33.25
Purge Method: Peristaltic pump

Purge Times(on/off): 10:37-11:28
Total Vol. Purged (L): 6.9
Sample Time: 11:29

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
10:40	0.14	6.53	16.8	3390	5.15	-122	27.50	22.43	Blackish w/ some odor
10:43	0.14	6.66	16.7	3380	3.70	-127	22.40	22.43	Slightly black w/ some odor
10:46	0.14	6.78	16.7	3380	2.80	-129	18.20	22.43	Slightly black w/ some odor
10:49	0.14	6.90	16.8	3340	2.35	-127	15.00	22.43	Slightly black w/ some odor
10:52	0.14	6.99	16.8	2660	2.16	-129	13.20	22.44	Slightly black w/ some odor
10:55	0.14	7.00	16.8	2090	1.87	-134	8.80	22.43	Slightly black w/ some odor
10:58	0.14	6.90	16.8	3530	1.80	-134	6.36	22.43	Mostly clear w/ some odor
11:01	0.14	6.89	16.8	3500	1.75	-134	4.07	22.43	Clear w/ some odor
11:04	0.14	6.83	16.9	5060	1.72	-129	2.98	22.45	Clear w/ some odor
11:07	0.14	6.81	16.9	4810	1.70	-134	2.69	22.45	Clear w/ some odor
11:10	0.14	6.83	16.9	5030	1.67	-136	1.73	22.45	Clear w/ some odor
11:13	0.14	6.83	16.9	4770	1.60	-138	1.57	22.45	Clear w/ some odor
11:16	0.14	6.82	16.9	4560	1.58	-134	1.23	22.45	Clear w/ some odor
11:19	0.14	6.82	16.9	4470	1.59	-137	1.28	22.45	Clear w/ some odor
11:22	0.14	6.82	16.8	4680	1.58	-136	1.29	22.45	Clear w/ some odor
11:25	0.14	6.82	16.8	4670	1.56	-136	1.34	22.45	Clear w/ some odor
11:28	0.14	6.81	16.8	4660	1.55	-137	1.32	22.45	Clear w/ some odor

Definition: TOC - Top of inner casing

Comments: A bladder pump could not be used in this well because of an obstruction at 13.5 ft. from the top of the casing, therefore a peristaltic pump was used. MS/MSD collected from this well (all parameters).

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/13/2002
Weather: Cloudy, Lt. rain 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: W6G
Total Well Depth (ft.): 23.31
Screen Interval (ft.): 13.31-23.31

Pre-pumping water level from TOC (ft.): 10.10
Pump Depth (ft.): 18.30
Purge Method: Peristaltic pump

Purge Times(on/off): 12:08-12:29
Total Vol. Purged (L): 5.4
Sample Time: 12:29

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp.(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
12:11	0.27	5.82	19.7	2800	0.90	-91	21.80	10.29	Slightly turbid strong odor
12:14	0.27	6.12	19.2	2830	0.77	-97	17.00	10.25	Slightly turbid strong odor
12:17	0.27	6.24	19.0	2820	0.71	-101	17.00	10.26	Slightly turbid strong odor
12:20	0.27	6.39	19.0	2840	0.67	-105	15.40	10.26	Mostly clear strong odor
12:23	0.27	6.46	18.9	2830	0.63	-105	15.70	10.26	Clear, strong odor
12:26	0.27	6.52	18.8	2830	0.60	-108	15.10	10.26	Clear, strong odor
12:29	0.27	6.54	18.8	2840	0.59	-107	15.30	10.26	Clear, strong odor

Definition: TOC - Top of inner casing

Comments: A bladder pump could not be used in this well because of an obstruction at 16.2 ft. from the top of the casing, therefore a peristaltic pump was used.

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/13/2002
Weather: Cloudy, Lt. rain 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: W6R
Total Well Depth (ft.): 29.76
Screen Interval (ft.): 24.76-29.76

Pre-pumping water level from TOC (ft.): 21.40
Pump Depth (ft.): 27.20
Purge Method: Bladder Pump

Purge Times(on/off): 13:26-13:47
Total Vol. Purged (L): 3.9
Sample Time: 13:48

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
13:29	0.19	6.79	16.6	3810	1.48	-235	22.20	23.62	Blackish w/ odor
13:32	0.19	7.05	16.9	3820	0.84	-247	15.70	23.79	Blackish w/ odor
13:35	0.19	7.27	16.8	3810	0.54	-275	11.30	24.09	Blackish w/ odor
13:38	0.19	7.44	16.5	3810	0.36	-285	8.49	24.09	Clearer w/ odor
13:41	0.19	7.48	16.2	3800	0.38	-301	7.64	24.09	Clear w/ odor
13:44	0.19	7.51	16.1	3810	0.37	-302	7.65	24.09	Clear w/ odor
13:47	0.19	7.58	16.1	3830	0.39	-302	7.72	24.09	Clear w/ odor

Definition: TOC - Top of inner casing

Comments: Water level had dropped more than 0.3 ft. , however, it stablilized at 24.09 ft. (above the well screen). Therefore, we continued with sampling.

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/14/2002
Weather: Sunny 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: W5R
Total Well Depth (ft.): 41.41
Screen Interval (ft.): 36.41-41.41

Pre-pumping water level from TOC (ft.): 22.46
Pump Depth (ft.): 38.90
Purge Method: Bladder Pump

Purge Times(on/off): 8:00-8:51
Total Vol. Purged (L): 9.6
Sample Time: 8:52

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(°C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
8:03	0.19	5.11	15.0	14120	3.86	35	32.10	22.49	Cloudy w/ odor
8:06	0.19	5.42	15.5	14100	2.97	-45	42.00	22.51	Cloudy w/ odor
8:09	0.19	5.76	16.0	14020	2.39	-48	57.20	22.51	Cloudy w/ odor
8:12	0.19	5.94	16.3	14000	2.07	-51	65.90	22.51	Cloudy w/ odor
8:15	0.19	6.15	16.4	13950	1.93	-48	70.50	22.51	Cloudy w/ odor
8:18	0.19	6.26	16.7	13760	1.88	-48	67.60	22.51	Cloudy w/ odor
8:21	0.19	6.34	16.6	13670	1.89	-51	62.70	22.51	Cloudy w/ odor
8:24	0.19	6.41	16.7	13640	1.97	-57	40.80	22.51	Cloudy w/ odor
8:27	0.19	6.46	16.5	13590	1.97	-62	24.10	22.51	Cloudy w/ odor
8:30	0.19	6.49	16.5	13600	1.77	-68	16.10	22.51	Slightly cloudy w/ odor
8:33	0.19	6.52	16.4	13450	1.92	-73	10.10	22.51	Slightly cloudy w/ odor
8:36	0.19	6.53	16.5	13430	1.87	-75	8.97	22.51	Clearer w/ odor
8:39	0.19	6.56	16.5	13450	1.27	-79	5.54	22.51	Clear w/ odor
8:42	0.19	6.57	16.5	13400	1.22	-81	9.47	22.51	Clear w/ odor
8:45	0.19	6.58	16.6	13330	1.07	-83	8.91	22.51	Clear w/ odor
8:48	0.19	6.58	16.5	13300	1.10	-81	9.27	22.51	Clear w/ odor
8:51	0.19	6.59	16.5	13270	1.02	-84	8.71	22.51	Clear w/ odor

Definition: TOC - Top of inner casing

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/14/2002
Weather: Sunny 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: W4R
Total Well Depth (ft.): 55.51
Screen Interval (ft.): 50.51-55.51

Pre-pumping water level from TOC (ft.): 18.77
Pump Depth (ft.): 53.00
Purge Method: Bladder Pump

Purge Times(on/off): 10:17-10:38
Total Vol. Purged (L): 4.2
Sample Time: 10:39

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(°C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
10:20	0.20	6.47	21.6	6470	3.59	-10	45.60	18.94	Cloudy, strong odor
10:23	0.20	6.42	19.3	6610	3.40	-8	58.60	18.95	Cloudy, strong odor
10:26	0.20	6.42	19.2	6560	2.97	-10	68.70	19.97	Cloudy, strong odor
10:29	0.20	6.45	19.3	6550	2.47	-15	87.70	18.98	Cloudy, strong odor
10:32	0.20	6.48	19.3	6540	2.15	-18	82.80	18.98	Cloudy, strong odor
10:35	0.20	6.49	19.3	6520	2.06	-20	76.60	18.98	Cloudy, strong odor
10:38	0.20	6.49	19.3	6600	2.00	-22	76.50	18.98	Cloudy, strong odor

Definition: TOC - Top of inner casing

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/14/2002
Weather: Sunny 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: W4S
Total Well Depth (ft.): 31.29
Screen Interval (ft.): 26.29-31.29

Pre-pumping water level from TOC (ft.): 18.62
Pump Depth (ft.): 28.80
Purge Method: Bladder pump

Purge Times(on/off): 10:56-11:35
Total Vol. Purged (L): 10.6
Sample Time: 11:36

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp (°C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
10:59	0.27	6.29	19.4	4920	1.07	-76	39.60	18.72	Cloudy, strong odor
11:02	0.27	6.31	19.3	4710	1.01	-79	21.60	18.75	Less cloudy, strong odor
11:05	0.27	6.39	19.3	4300	0.88	-84	18.60	18.75	Clear, strong odor
11:08	0.27	6.44	19.3	4240	0.68	-87	16.40	18.77	Clear, strong odor
11:11	0.27	6.50	19.3	3590	0.51	-92	18.40	18.78	Clear, strong odor
11:14	0.27	6.50	19.7	3320	0.36	-95	17.80	18.79	Clear, strong odor
11:17	0.27	6.52	19.9	3370	0.28	-101	14.00	18.79	Clear, strong odor
11:20	0.27	6.54	19.9	3210	0.24	-103	11.70	18.79	Clear, strong odor
11:23	0.27	6.54	19.9	3270	0.22	-105	10.50	18.79	Clear, strong odor
11:26	0.27	6.54	20.0	3210	0.22	-106	10.10	18.80	Clear, strong odor
11:29	0.27	6.55	20.1	3370	0.21	-106	8.99	18.80	Clear, strong odor
11:32	0.27	6.55	20.1	3390	0.20	-107	9.05	18.80	Clear, strong odor
11:35	0.27	6.56	20.2	3360	0.20	-108	8.26	18.80	Clear, strong odor

Definition: TOC - Top of inner casing

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/14/2002
Weather: Sunny 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: W3S
Total Well Depth (ft.): 31.11
Screen Interval (ft.): 26.11-31.11

Pre-pumping water level from TOC (ft.): 19.84
Pump Depth (ft.): 28.60
Purge Method: Bladder Pump

Purge Times(on/off): 12:22-13:13
Total Vol. Purged (L): 9.9
Sample Time: 13:14

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
12:25	0.19	5.93	19.9	5330	1.68	-68	204.00	19.89	Cloudy (orange / yellow) strong odor
12:28	0.19	6.00	19.7	5320	1.24	-74	193.00	19.90	Cloudy (orange / yellow) strong odor
12:31	0.19	6.10	19.6	5300	0.99	-80	177.00	19.89	Cloudy (orange / yellow) strong odor
12:34	0.19	6.21	19.5	5280	0.84	-82	155.00	19.89	Cloudy (orange / yellow) strong odor
12:37	0.19	6.29	19.4	5260	0.74	-85	98.10	19.89	Cloudy (orange / yellow) strong odor
12:40	0.19	6.32	19.4	5260	0.71	-85	89.40	19.89	Cloudy (orange / yellow) strong odor
12:43	0.19	6.34	19.5	5240	0.75	-86	73.20	19.90	Cloudy (orange / yellow) strong odor
12:46	0.19	6.39	19.6	5230	0.65	-88	57.30	19.90	Slightly cloudy, strong odor
12:49	0.19	6.40	19.6	5230	0.60	-89	50.60	19.90	Slightly cloudy, strong odor
12:52	0.19	6.43	19.6	5220	0.56	-89	41.60	19.90	Slightly cloudy, strong odor
12:55	0.19	6.43	19.7	5220	0.51	-90	31.30	19.90	Slightly cloudy, strong odor
12:58	0.19	6.45	19.7	5220	0.48	-91	27.00	19.90	Slightly cloudy, strong odor
13:01	0.19	6.47	19.8	5220	0.48	-92	25.10	19.90	Slightly cloudy, strong odor
13:04	0.19	6.47	19.8	5230	0.47	-92	20.20	19.90	Slightly cloudy, strong odor
13:07	0.19	6.48	19.7	5230	0.50	-93	27.60	19.90	Slightly cloudy, strong odor
13:10	0.19	6.49	19.7	5230	0.51	-93	25.30	19.90	Slightly cloudy, strong odor
13:13	0.19	6.48	19.8	5240	0.52	-93	25.90	19.90	Slightly cloudy, strong odor

Definition: TOC - Top of inner casing

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/14/2002
Weather: Sunny 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: W3RR
Total Well Depth (ft.): 54.13
Screen Interval (ft.): 49.13-54.13

Pre-pumping water level from TOC (ft.): 19.88
Pump Depth (ft.): 51.80
Purge Method: Bladder Pump

Purge Times(on/off): 13:49-14:07
Total Vol. Purged (L): 5.3
Sample Time: 14:08

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (SU)	Temp (°C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
13:52	0.29	6.61	24.4	5790	1.94	-27	18.50	20.06	Clear, strong odor
13:55	0.29	6.43	21.0	5850	1.65	-22	8.01	20.11	Clear, strong odor
13:58	0.29	6.40	20.2	5860	1.33	-25	6.09	20.12	Clear, strong odor
14:01	0.29	6.41	20.1	5820	1.22	-28	3.31	20.14	Clear, strong odor
14:14	0.29	6.42	20.1	5820	1.22	-32	3.26	20.14	Clear, strong odor
14:07	0.29	6.43	20.1	5800	1.32	-33	3.47	20.13	Clear, strong odor

Definition: TOC - Top of inner casing

Comments: Blind duplicate DUP-01 collected at this well.

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck, & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/15/2002
Weather: Sunny 50-60°F

Analyst: R. Toogood

Monitoring Well I.D.: W4G
Total Well Depth (ft.): 17.27
Screen Interval (ft.): 7.77-17.27

Pre-pumping water level from TOC (ft.): 8.86
Pump Depth (ft.): 13.20
Purge Method: Bladder Pump

Purge Times(on/off): 8:00-8:42
Total Vol. Purged (L): 3.65
Sample Time: 8:43

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
8:03	0.09	5.52	18.0	3400	3.27	116	101.00	9.20	Cloudy (orange), strong odor
8:06	0.09	6.23	17.4	3320	2.37	108	89.40	9.52	Cloudy (orange), strong odor
8:09	0.09	6.50	17.3	3240	1.64	98	90.00	9.72	Cloudy (orange), strong odor
8:12	0.09	6.62	17.3	3180	1.23	84	88.10	9.98	Cloudy (orange), strong odor
8:15	0.09	6.67	17.2	3150	1.09	-33	86.00	9.98	Cloudy (orange), strong odor
8:18	0.09	6.68	16.7	3110	1.06	-41	82.10	10.18	Cloudy (orange), strong odor
8:21	0.09	6.74	17.0	3020	0.95	-69	71.00	10.61	Cloudy (orange), strong odor
8:24	0.09	6.75	17.1	2990	0.91	-73	63.00	10.84	Cloudy (orange), strong odor
8:27	0.09	6.76	16.9	2980	0.89	-78	62.20	10.97	Cloudy (orange), strong odor
8:30	0.09	6.77	16.9	2950	0.87	-78	56.80	11.04	Cloudy (orange), strong odor
8:33	0.09	6.78	16.8	2890	0.90	-81	51.14	11.21	Cloudy (orange), strong odor
8:36	0.09	6.78	16.9	2900	0.81	-82	50.80	11.44	Cloudy (orange), strong odor
8:39	0.09	6.76	16.8	2900	0.79	-82	49.50	11.51	Cloudy (orange), strong odor
8:42	0.09	6.74	16.5	2880	0.83	-84	48.50	11.66	Cloudy (orange), strong odor

Definition: TOC - Top of inner casing

Comments: Water level continued to drop despite efforts to reduce purge rate. Client advised to sample once all field parameters had stabilized. The water in the well had drew down to the intake of the pump before we could complete sampling. The pump was then pulled and a peristaltic pump was used to collect the rest of the sample.

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck, & Lee, Inc.
Project: Kim Buc Landfill

Date: 11/15/2002
Weather: Sunny 50-60°F

Analyst: R. Toogood

Monitoring Well I.D.: W13G
Total Well Depth (ft.): 10.55
Screen Interval (ft.): 5.55-10.55

Pre-pumping water level from TOC (ft.): 3.12
Pump Depth (ft.): 8.10
Purge Method: Bladder Pump

Purge Times(on/off): 9:49-10:19
Total Vol. Purged (L): 9.4
Sample Time: 10:20

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(°C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
9:52	0.31	5.03	18.3	2500	2.17	-44	85.40	3.41	Turbid (orange), strong odor
9:55	0.31	5.46	16.4	2460	1.63	-66	43.10	3.41	Turbid (orange), strong odor
9:58	0.31	5.78	16.1	2460	1.32	-78	31.10	3.41	Turbid (orange), strong odor
10:01	0.31	6.01	16.0	2440	1.02	-82	24.40	3.44	Turbid (orange), strong odor
10:04	0.31	6.15	16.0	2440	0.84	-85	18.60	3.44	Mostly clear, strong odor
10:07	0.31	6.24	16.0	2430	0.67	-87	15.40	3.44	Mostly clear, strong odor
10:10	0.31	6.28	16.0	2420	0.59	-89	13.20	3.44	Mostly clear, strong odor
10:13	0.31	6.30	16.0	2420	0.55	-91	12.60	3.44	Mostly clear, strong odor
10:16	0.31	6.33	16.0	2420	0.51	-94	13.80	3.44	Mostly clear, strong odor
10:19	0.31	6.07	16.0	2410	0.54	-94	12.80	3.44	Mostly clear, strong odor

Definition: TOC - Top of inner casing

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck, & Lee, Inc.
Project: Kim Buc Landfill

Date: 11/15/2002
Weather: Sunny 50-60°F

Analyst: R. Toogood

Monitoring Well I.D.: W13S
Total Well Depth (ft.): 29.10
Screen Interval (ft.): 24.1-29.1

Pre-pumping water level from TOC (ft.): 7.62
Pump Depth (ft.): 26.60
Purge Method: Bladder Pump

Purge Times(on/off): 10:57-11:36
Total Vol. Purged (L): 8.8
Sample Time: 11:37

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
11:00	0.24	5.55	18.8	10300	1.83	-65	66.90	7.67	Cloudy, mild odor
11:03	0.24	5.90	17.0	10600	1.23	-70	43.30	7.65	Cloudy, mild odor
11:06	0.24	6.22	16.4	10760	1.10	-77	35.50	7.66	Cloudy, mild odor
11:09	0.24	6.42	16.2	10760	0.59	-85	23.80	7.66	Cloudy, mild odor
11:12	0.24	6.47	16.1	10760	0.52	-86	16.90	7.66	Cloudy, mild odor
11:15	0.24	6.48	16.2	10770	0.47	-87	15.70	7.66	Clear, mild odor
11:18	0.24	6.53	16.2	10780	0.41	-89	12.90	7.66	Clear, mild odor
11:21	0.24	6.55	16.2	10810	0.37	-91	8.95	7.66	Clear, mild odor
11:24	0.24	6.58	16.2	10830	0.36	-94	6.04	7.67	Clear, mild odor
11:27	0.24	6.60	16.2	10870	0.35	-95	4.19	7.65	Clear, mild odor
11:30	0.24	6.63	16.3	10870	0.33	-97	3.20	7.66	Clear, mild odor
11:33	0.24	6.64	16.3	10870	0.32	-98	3.09	7.66	Clear, mild odor
11:36	0.24	6.65	16.4	10910	0.33	-98	3.00	7.66	Clear, mild odor

Definition: TOC - Top of inner casing

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck, & Lee, Inc.
Project: Kim Buc Landfill

Date: 11/15/2002
Weather: Sunny 50-60°F

Analyst: R. Toogood

Monitoring Well I.D.: WE114DR
Total Well Depth (ft.): 44.60
Screen Interval (ft.): 34.6-44.6

Pre-pumping water level from TOC (ft.): 16.51
Pump Depth (ft.): 39.60
Purge Method: Bladder Pump

Purge Times(on/off): 12:29-12:47
Total Vol. Purged (L): 2.9
Sample Time: 12:48

Field Measurements / Readings During Purge

Time	*Purge Rate (L/min.)*	*pH (su)*	*Temp.(° C)*	*Conductivity (umhos/cm)*	*Dissolved Oxygen (ppm)*	*Redox Potential (mV)*	*Turbidity (NTU)*	*Depth to Water from TOC (ft.)*	*Comments*
12:32	0.22	6.55	19.3	796	3.82	-62	7.51	17.82	Clear, slight odor, reduced purge rate
12:35	0.16	6.61	18.8	730	3.20	-51	7.33	17.98	Clear, slight odor
12:38	0.16	6.65	18.6	707	3.20	-49	7.23	17.99	Clear, slight odor
12:41	0.16	6.68	18.6	695	3.25	-50	7.11	18.04	Clear, slight odor
12:44	0.16	6.68	18.5	684	3.46	-46	7.48	18.07	Clear, slight odor
12:47	0.16	6.68	18.5	679	3.39	-44	7.68	18.11	Clear, slight odor

Definition: TOC - Top of inner casing

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck, & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/18/2002
Weather: Cloudy 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: W6G
Total Well Depth (ft.): 23.34
Screen Interval (ft.): 18.34-23.34

Pre-pumping water level from TOC (ft.): 9.98
Pump Depth (ft.): 18.30
Purge Method: Peristaltic pump

Purge Times(on/off): 8:18-8:54
Total Vol. Purged (L): 5.7
Sample Time: 8:54

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
8:21	0.16	4.55	16.6	2780	2.29	-35	16.60	10.10	Clear, strong odor
8:24	0.16	5.27	16.7	2660	1.83	-49	12.80	10.11	Clear, strong odor
8:27	0.16	5.57	16.4	2680	1.93	-59	8.93	10.05	Clear, strong odor
8:30	0.16	5.66	16.3	2670	1.90	-61	7.30	10.06	Clear, strong odor
8:33	0.16	5.77	16.2	2660	1.83	-63	7.41	10.06	Clear, strong odor
8:36	0.16	5.87	16.0	2640	1.75	-65	7.52	10.06	Clear, strong odor
8:39	0.16	5.93	16.0	2640	1.65	-66	7.75	10.06	Clear, strong odor
8:42	0.16	6.00	16.0	2600	1.51	-67	7.96	10.06	Clear, strong odor
8:45	0.16	6.09	16.1	2560	1.38	-68	7.99	10.06	Clear, strong odor
8:48	0.16	6.13	15.9	2570	1.27	-69	8.17	10.06	Clear, strong odor
8:51	0.16	6.17	15.9	2480	1.23	-69	8.23	10.06	Clear, strong odor
8:54	0.16	6.19	15.9	2460	1.19	-70	8.41	10.06	Clear, strong odor

Definition: TOC - Top of inner casing

Comments: Resample of well due to shipping Co. losing samples from 11/13/02 sampling event. See 11/13/02 sampling data.

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck, & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/18/2002
Weather: Cloudy 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: W6R
Total Well Depth (ft.): 29.77
Screen Interval (ft.): 24.77-29.77

Pre-pumping water level from TOC (ft.): 22.14
Pump Depth (ft.): 27.20
Purge Method: Bladder Pump

Purge Times(on/off): 9:04-9:46
Total Vol. Purged (L): 7.7
Sample Time: 9:47

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
9:07	0.18	7.25	15.4	4230	1.45	-225	4.03	24.24	Clear, strong odor
9:10	0.18	7.39	15.3	4230	0.75	-247	3.71	24.71	Clear, strong odor
9:13	0.18	7.48	15.3	4220	0.56	-267	4.21	24.95	Clear, strong odor
9:16	0.18	7.55	15.1	4230	0.45	-275	4.05	25.15	Clear, strong odor
9:19	0.18	7.64	15.0	4280	0.36	-279	2.75	25.27	Clear, strong odor
9:22	0.18	7.73	15.1	4370	0.31	-283	2.09	25.35	Clear, strong odor
9:25	0.18	7.68	15.1	4690	0.30	-293	1.46	25.38	Clear, strong odor
9:28	0.18	7.61	15.1	4680	0.29	-289	1.21	25.41	Clear, strong odor
9:31	0.18	6.58	15.1	4690	0.27	-271	1.19	25.43	Clear, strong odor
9:34	0.18	6.56	15.0	4700	0.30	-276	0.85	25.47	Clear, strong odor
9:37	0.18	6.84	15.0	4710	0.31	-285	0.77	25.49	Clear, strong odor
9:40	0.18	6.80	15.0	4720	0.33	-287	0.67	25.50	Clear, strong odor
9:43	0.18	6.80	15.0	4730	0.33	-289	0.74	25.51	Clear, strong odor
9:46	0.18	6.87	15.1	4740	0.34	-290	0.68	25.54	Clear, strong odor

Definition: TOC - Top of inner casing

Comments: Resample of well due to shipping Co. losing samples from 11/13/02 sampling event. See 11/13/02 sampling data.

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck, & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/18/2002
Weather: Cloudy 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: WE3R
Total Well Depth (ft.): 46.54
Screen Interval (ft.): 41.54-46.54

Pre-pumping water level from TOC (ft.): 14.05
Pump Depth (ft.): 44.00
Purge Method: Bladder Pump

Purge Times(on/off): 11:09-11:36
Total Vol. Purged (L): 4.6
Sample Time: 11:37

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
11:12	0.17	5.56	13.4	9250	7.03	-141	42.30	14.36	Clear, mild odor
11:15	0.17	5.72	13.2	9000	6.37	-135	31.80	14.68	Clear, mild odor
11:18	0.17	5.91	13.2	8610	5.91	-132	17.70	14.75	Clear, mild odor
11:21	0.17	6.01	13.0	8380	5.42	-132	11.50	14.77	Clear, mild odor
11:24	0.17	6.11	13.1	8320	5.26	-131	7.73	14.80	Clear, mild odor
11:27	0.17	6.19	13.2	8240	5.01	-132	7.98	14.80	Clear, mild odor
11:30	0.17	6.25	13.0	8190	4.87	-132	8.07	14.80	Clear, mild odor
11:33	0.17	6.30	13.0	8110	4.61	-134	8.74	14.80	Clear, mild odor
11:36	0.17	6.34	13.1	8090	4.61	-132	8.59	14.80	Clear, mild odor

Definition: TOC - Top of inner casing

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck, & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/18/2002
Weather: Cloudy 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: WE3S
Total Well Depth (ft.): 25.64
Screen Interval (ft.): 20.64-25.64

Pre-pumping water level from TOC (ft.): 13.59
Pump Depth (ft.): 23.10
Purge Method: Bladder Pump

Purge Times(on/off): 11:58-12:52
Total Vol. Purged (L): 11.3
Sample Time: 12:53

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
12:01	0.20	5.45	13.3	3780	4.55	-100	12.10	13.61	Blackish, strong odor
12:04	0.20	5.73	13.1	3690	2.77	-94	10.10	13.69	Blackish, strong odor
12:07	0.20	5.80	13.9	3760	1.57	-112	10.50	13.71	Clear, strong odor
12:10	0.20	5.98	14.3	4580	0.88	-133	7.96	13.71	Clear, strong odor
12:13	0.20	6.03	14.2	5950	0.77	-136	8.39	13.71	Clear, strong odor
12:16	0.20	6.17	14.0	6350	0.72	-141	7.49	13.72	Clear, strong odor
12:19	0.20	6.22	14.0	6680	0.65	-145	6.07	13.72	Clear, strong odor
12:22	0.20	6.28	14.0	6810	0.58	-149	6.21	13.72	Clear, strong odor
12:25	0.20	6.31	14.0	6800	0.56	-154	4.73	13.72	Clear, strong odor
12:28	0.20	6.35	14.0	6790	0.49	-155	4.25	13.72	Clear, strong odor
12:31	0.20	6.38	14.1	6770	0.44	-159	3.77	13.72	Clear, strong odor
12:34	0.20	6.37	14.1	6760	0.43	-158	3.53	13.72	Clear, strong odor
12:37	0.20	6.42	14.0	6760	0.41	-160	3.22	13.72	Clear, strong odor
12:40	0.20	6.41	14.0	6800	0.40	-162	3.69	13.72	Clear, strong odor
12:43	0.20	6.43	14.3	6810	0.39	-162	3.44	13.72	Clear, strong odor
12:46	0.20	6.46	14.2	6820	0.35	-161	3.21	13.72	Clear, strong odor
12:49	0.20	6.44	14.2	6830	0.34	-163	3.17	13.72	Clear, strong odor
12:52	0.20	6.44	14.2	6830	0.35	-164	3.14	13.72	Clear, strong odor

Definition: TOC - Top of inner casing

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck, & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/19/2002
Weather: Sunny 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: WE6R
Total Well Depth (ft.): 47.15
Screen Interval (ft.): 42.15-47.15

Pre-pumping water level from TOC (ft.): 18.60
Pump Depth (ft.): 44.60
Purge Method: Bladder Pump

Purge Times(on/off): 11:23-12:05
Total Vol. Purged (L): 19.1
Sample Time: 12:06

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
11:26	0.24	5.58	13.8	8970	2.13	-27	10.60	19.31	Mostly, clear mild odor
11:21	0.24	5.89	13.9	8700	1.61	-32	3.84	19.46	Mostly, clear mild odor
11:32	0.24	6.01	13.8	8590	1.45	-35	2.91	19.50	Clear, mild odor
11:35	0.24	6.14	13.8	8520	1.27	-39	2.39	19.54	Clear, mild odor
11:38	0.24	6.25	13.8	8460	1.11	-44	1.01	19.62	Clear, mild odor
11:41	0.24	6.33	13.8	8370	1.05	-57	0.99	19.62	Clear, mild odor
11:44	0.24	6.38	13.8	8230	1.00	-87	0.72	19.62	Clear, mild odor
11:47	0.24	6.44	13.8	8110	0.95	-99	0.84	19.70	Clear, mild odor
11:50	0.24	6.52	13.9	8280	0.82	-115	1.23	19.74	Clear, mild odor
11:53	0.24	6.54	13.8	8200	0.78	-123	0.99	19.76	Clear, mild odor
11:56	0.24	6.60	13.8	8090	0.68	-130	1.11	19.82	Clear, mild odor
11:59	0.24	6.62	13.7	8020	0.62	-136	0.98	19.82	Clear, mild odor
12:02	0.24	6.63	13.6	7990	0.61	-138	0.98	19.84	Clear, mild odor
12:05	0.24	6.63	13.6	7980	0.59	-144	0.96	19.91	Clear, mild odor

Definition: TOC - Top of inner casing

Comments: Water level continued to drop despite efforts to reduce purge rate. Client advised to sample once all field parameters had stabilized.

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck, & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/19/2002
Weather: Sunny 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: GEI3G
Total Well Depth (ft.): 13.65
Screen Interval (ft.): 8.65-13.65

Pre-pumping water level from TOC (ft.): 3.95
Pump Depth (ft.): 11.10
Purge Method: Bladder Pump

Purge Times(on/off): 13:12-14:06
Total Vol. Purged (L): 15.9
Sample Time: 14:07

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
13:15	0.29	5.61	14.4	1247	0.94	-17	53.70	4.00	Clear, mild odor
13:18	0.29	6.05	14.7	1098	0.91	-31	47.70	4.00	Clear, mild odor
13:21	0.29	6.29	14.7	1084	0.57	-71	41.20	4.00	Clear, mild odor
13:24	0.29	6.47	14.8	1090	0.39	-139	22.50	4.00	Clear, mild odor
13:27	0.29	6.58	15.1	1098	0.39	-147	20.50	4.00	Clear, mild odor
13:30	0.29	6.55	15.4	902	0.34	-157	13.10	4.00	Clear, mild odor
13:33	0.29	6.60	15.4	885	0.33	-163	11.30	4.00	Clear, mild odor
13:36	0.29	6.59	15.5	865	0.33	-162	10.40	4.00	Clear, mild odor
13:39	0.29	6.64	15.5	801	0.29	-167	9.88	4.00	Clear, mild odor
13:42	0.29	6.61	15.5	704	0.28	-171	7.70	4.00	Clear, mild odor
13:45	0.29	6.65	15.6	848	0.28	-175	5.45	4.00	Clear, mild odor
13:48	0.29	6.65	15.6	770	0.25	-176	4.89	4.00	Clear, mild odor
13:51	0.29	6.63	15.6	785	0.24	-178	4.09	4.00	Clear, mild odor
13:54	0.29	6.66	15.7	788	0.23	-179	3.41	4.00	Clear, mild odor
13:57	0.29	6.66	15.7	779	0.23	-180	3.37	4.00	Clear, mild odor
14:00	0.29	6.66	15.7	741	0.22	-181	4.39	4.00	Clear, mild odor
13:03	0.29	6.67	15.7	740	0.21	-180	4.50	4.00	Clear, mild odor
14:06	0.29	6.67	15.9	729	0.20	-182	4.62	4.00	Clear, mild odor

Definition: TOC - Top of inner casing

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kim Buc Land Fill

Date: 11/20/2002
Weather: Sunny 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: GEI5G
Total Well Depth (ft.): 14.60
Screen Interval (ft.): 11.60-14.60

Pre-pumping water level from TOC (ft.): 9.08
Pump Depth (ft.): 13.10
Purge Method: Bladder Pump

Purge Times(on/off): 8:00-8:24
Total Vol. Purged (L): 3.0
Sample Time: 8:25

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
8:03	0.13	5.22	11.6	1339	3.82	4	24.50	9.36	Clear, strong odor
8:06	0.13	5.60	13.1	1336	3.19	-1	23.40	9.47	Clear, strong odor
8:09	0.13	5.72	13.4	1333	2.69	-15	22.10	9.52	Clear, strong odor
8:12	0.13	5.87	14.8	1334	2.34	-23	20.30	9.57	Clear, strong odor
8:15	0.13	5.98	15.3	1347	2.33	-29	18.10	9.63	Clear, strong odor
8:18	0.13	6.09	15.8	1540	1.80	-39	16.60	9.65	Clear, strong odor
8:21	0.13	6.14	16.6	1559	1.73	-40	15.70	9.67	Clear, strong odor
8:24	0.13	6.16	16.6	1559	1.65	-47	16.00	9.68	Clear, strong odor

Definition: TOC - Top of inner casing

Comments: Water level continued to drop despite efforts to reduce purge rate. Client advised to sample once all field parameters had stabilized.

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kim Buc Land Fill

Date: 11/20/2002
Weather: Sunny 40-50°F

Job:
Analyst: R. Toogood

Monitoring Well I.D.: WE5S
Total Well Depth (ft.): 25.85
Screen Interval (ft.): 20.85-25.85

Pre-pumping water level from TOC (ft.): 13.33
Pump Depth (ft.): 23.50
Purge Method: Bladder Pump

Purge Times(on/off): 8:40-9:16
Total Vol. Purged (L): 10.4
Sample Time: 9:17

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
8:43	0.29	6.14	16.8	4330	1.15	-101	3.22	13.33	Clear, strong odor
8:46	0.29	6.36	16.9	4320	0.98	-108	5.78	13.33	Clear, strong odor
8:49	0.29	6.39	16.9	4310	0.91	-111	1.42	13.33	Clear, strong odor
8:52	0.29	6.47	16.6	4270	0.80	-113	1.18	13.33	Clear, strong odor
8:55	0.29	6.58	16.6	4190	0.69	-115	1.23	13.33	Clear, strong odor
8:58	0.29	6.62	16.4	4100	0.59	-119	1.06	13.33	Clear, strong odor
9:01	0.29	6.64	16.4	4070	0.54	-122	0.98	13.33	Clear, strong odor
9:04	0.29	6.69	16.5	4010	0.50	-123	1.00	13.33	Clear, strong odor
9:07	0.29	6.70	16.4	3980	0.46	-125	0.99	13.33	Clear, strong odor
9;10	0.29	6.70	16.4	3900	0.44	-126	1.03	13.33	Clear, strong odor
9:13	0.29	6.67	16.2	3890	0.44	-127	0.97	13.33	Clear, strong odor
9:16	0.29	6.70	16.3	3880	0.42	-128	1.06	13.33	Clear, strong odor

Definition: TOC - Top of inner casing

Comments: MS/MSD collected from this well (all parameters).

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kim Buc Land Fill

Date: 11/20/2002
Weather: Sunny 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: GEI6G
Total Well Depth (ft.): 14.81
Screen Interval (ft.): 11.31-14.81

Pre-pumping water level from TOC (ft.): 11.35
Pump Depth (ft.): 13.00
Purge Method: Bladder pump

Purge Times(on/off): 10:49-11:25
Total Vol. Purged (L): 4.7
Sample Time: 11:26

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
10:52	0.13	7.06	18.4	5430	5.05	-16	44.30	11.88	Cloudy (orange), strong odor
10:55	0.13	7.05	18.4	5460	4.34	-19	37.30	11.97	Cloudy (orange), strong odor
10:58	0.13	7.06	18.5	5340	3.22	-16	35.90	12.05	Cloudy (orange), strong odor
11:01	0.13	7.06	18.5	5290	2.15	-16	35.70	12.12	Cloudy (orange), strong odor
11:04	0.13	7.06	18.5	5320	1.89	-16	35.90	12.19	Cloudy (orange), strong odor
11:07	0.13	7.05	18.5	5360	1.29	-36	31.70	12.25	Cloudy (orange), strong odor
11:10	0.13	7.05	18.4	5380	0.96	-48	33.70	12.29	Cloudy (orange), strong odor
11:13	0.13	7.05	18.2	5390	0.83	-55	28.30	12.36	Cloudy (orange), strong odor
11:16	0.13	7.05	18.4	5410	0.71	-61	26.90	12.40	Cloudy (orange), strong odor
11:19	0.13	7.05	18.2	5400	0.66	-68	25.60	12.42	Cloudy (orange), strong odor
11:22	0.13	7.05	18.2	5400	0.63	-69	25.90	12.45	Cloudy (orange), strong odor
11:25	0.13	7.05	18.3	5410	0.61	-70	26.20	12.46	Cloudy (orange), strong odor

Definition: TOC - Top of inner casing

Comments: Water level continued to drop despite efforts to reduce purge rate. Client advised to sample once all field parameters had stabilized.

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kim Buc Land Fill

Date: 11/20/2002
Weather: Sunny 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: WE5R
Total Well Depth (ft.): 49.63
Screen Interval (ft.): 44.63-49.63

Pre-pumping water level from TOC (ft.): 13.76
Pump Depth (ft.): 47.10
Purge Method: Bladder Pump

Purge Times(on/off): 12:30-13:36
Total Vol. Purged (L): 12.2
Sample Time: 13:37

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
12:33	0.19	6.43	20.3	3630	8.34	-8	>1000	13.95	Very turbid, strong odor
12:36	0.19	6.43	17.5	3521	7.05	-4	>1000	14.11	Very turbid, strong odor
12:39	0.19	6.48	16.8	3130	5.24	-5	91.40	14.11	Turbid, strong odor
12:42	0.19	6.49	16.7	3030	5.17	-5	58.10	14.11	Turbid, strong odor
12:45	0.19	6.50	16.6	2890	5.19	-4	34.90	14.13	Clearer, strong odor
12:48	0.19	6.51	16.7	2650	4.59	-3	26.80	14.16	Clearer, strong odor
12:51	0.19	6.54	16.8	2580	4.51	-6	20.80	14.17	Clear, strong odor
12:54	0.19	6.56	16.5	2470	4.31	-5	17.10	14.20	Clear, strong odor
12:57	0.19	6.56	16.6	2380	3.81	-5	16.80	14.22	Clear, strong odor
13:00	0.19	6.59	16.4	2310	3.10	-5	13.20	14.25	Clear, strong odor
13:03	0.19	6.58	16.3	2230	2.24	-6	7.76	14.27	Clear, strong odor
13:06	0.19	6.59	16.5	2230	1.71	-7	5.89	14.28	Clear, strong odor
13:09	0.19	6.59	16.5	2210	1.39	-9	5.93	14.29	Clear, strong odor
13:12	0.19	6.61	16.5	2190	1.18	-10	6.15	14.30	Clear, strong odor
13:15	0.19	6.61	16.4	2180	1.06	-10	5.90	14.31	Clear, strong odor
13:18	0.19	6.59	16.5	2180	1.06	-11	7.42	14.32	Clear, strong odor
13:21	0.19	6.63	16.4	2170	0.97	-11	7.04	14.35	Clear, strong odor

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Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kim Buc Land Fill

Date: 11/20/2002
Weather: Sunny 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: WE5R

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
13:24	0.19	6.63	16.3	2140	0.94	-12	6.62	14.39	Clear, strong odor
13:27	0.19	6.62	16.3	2130	0.91	-14	6.39	14.40	Clear, strong odor
13:30	0.19	6.60	16.1	2110	0.88	-14	5.37	14.44	Clear, strong odor
13:33	0.19	6.62	16.2	2120	0.84	-15	5.52	14.48	Clear, strong odor
13:36	0.19	6.62	16.2	2120	0.82	-17	5.69	14.51	Clear, strong odor

Definition: TOC - Top of inner casing

Comments: Water level continued to drop despite efforts to reduce purge rate. Client advised to sample once all field parameters had stabilized.

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kim Buc Land Fill

Date: 11/20/2002
Weather: Sunny 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: GEI6S
Total Well Depth (ft.): 43.55
Screen Interval (ft.): 38.55-43.55

Pre-pumping water level from TOC (ft.): 21.37
Pump Depth (ft.): 41.00
Purge Method: Peristaltic pump

Purge Times(on/off): 14:54-15:36
Total Vol. Purged (L): 9.2
Sample Time: 15:37

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (SU)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
14:57	0.22	6.84	20.5	1516	3.75	-81	79.30	21.45	Cloudy, strong odor
15:00	0.22	6.77	19.1	1509	2.43	-94	36.90	21.45	Cloudy, strong odor
15:03	0.22	6.80	18.3	1617	2.41	-101	38.30	21.45	Cloudy, strong odor
15:06	0.22	6.79	18.1	1609	2.11	-105	20.40	21.47	Cloudy, strong odor
15:09	0.22	6.78	18.0	1600	1.83	-106	15.10	21.48	Clear, strong odor
15:12	0.22	6.77	18.0	1530	1.67	-107	15.00	21.49	Clear, strong odor
15:15	0.22	6.77	18.0	1291	1.57	-108	14.50	21.48	Clear, strong odor
15:18	0.22	6.77	18.1	1074	1.51	-109	14.50	21.48	Clear, strong odor
15:21	0.22	6.77	18.1	746	1.40	-109	13.80	21.48	Clear, strong odor
15:24	0.22	6.76	18.1	732	1.37	-109	12.90	21.48	Clear, strong odor
15:27	0.22	6.76	18.1	660	1.32	-109	11.70	21.48	Clear, strong odor
15:30	0.22	6.76	18.1	765	1.31	-109	11.80	21.48	Clear, strong odor
15:33	0.22	6.76	18.2	779	1.26	-109	11.80	21.48	Clear, strong odor
15:36	0.22	6.77	18.3	781	1.28	-109	12.30	21.48	Clear, strong odor

Definition: TOC - Top of inner casing

Comments: A bladder pump could not be used because of an obstruction in the well at approx. 20 ft., therefore, a peristaltic pump was used.

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/21/2002
Weather: Sunny 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: WE7S
Total Well Depth (ft.): 30.01
Screen Interval (ft.): 25.01-30.01

Pre-pumping water level from TOC (ft.): 13.34
Pump Depth (ft.): 27.50
Purge Method: Bladder Pump

Purge Times(on/off): 7:57-8:33
Total Vol. Purged (L): 6.9
Sample Time: 8:34

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
8:00	0.19	5.62	15.9	2860	4.01	-75	106.00	13.29	Turbid, strong odor
8:03	0.19	5.87	14.8	2910	2.26	-83	107.00	13.29	Turbid, strong odor
8:06	0.19	5.99	14.7	2940	2.19	-83	92.10	13.28	Turbid, strong odor
8:09	0.19	6.07	14.7	2960	2.05	-88	83.20	13.28	Turbid, strong odor
8:12	0.19	6.27	14.6	2980	1.68	-95	71.90	13.28	Turbid, strong odor
8:15	0.19	6.35	14.6	3000	1.19	-99	95.10	13.28	Turbid, strong odor
8:18	0.19	6.56	14.6	2990	2.12	-98	55.20	13.28	Turbid, strong odor
8:21	0.19	6.56	14.6	2920	3.97	-95	51.20	13.28	Turbid, strong odor
8:24	0.19	6.56	14.6	2890	4.12	-92	51.50	13.28	Turbid, strong odor
8:27	0.19	6.66	14.6	2860	4.22	-90	52.80	13.28	Turbid, strong odor
8:30	0.19	6.78	14.6	2900	4.25	-89	54.40	13.28	Turbid, strong odor
8:33	0.19	6.73	14.6	2910	4.26	-90	51.70	13.28	Turbid, strong odor

Definition: TOC - Top of inner casing

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/21/2002
Weather: Sunny 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: WE7R
Total Well Depth (ft.): 73.22
Screen Interval (ft.): 68.22-73.22

Pre-pumping water level from TOC (ft.): 12.85
Pump Depth (ft.): 70.70
Purge Method: Bladder Pump

Purge Times(on/off): 9:14-9:44
Total Vol. Purged (L): 4.2
Sample Time: 9:45

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
9:17	0.14	5.26	17.8	2470	5.30	-35	123.00	14.34	Turbid, very light odor
9:20	0.14	5.68	15.1	2330	4.28	-32	115.00	14.48	Turbid, very light odor
9:23	0.14	6.01	14.6	2240	4.10	-30	92.60	14.61	Turbid, very light odor
9:26	0.14	6.19	14.6	2190	4.05	-29	74.60	15.31	Turbid, very light odor
9:29	0.14	6.32	14.6	2140	3.93	-29	59.30	15.91	Turbid, very light odor
9:32	0.14	6.40	14.6	2110	3.96	-29	50.50	16.15	Turbid, very light odor
9:35	0.14	6.49	14.6	2060	4.05	-27	43.50	16.67	Turbid, very light odor
9:38	0.14	6.53	14.5	2030	3.92	-26	38.90	17.26	Turbid, very light odor
9:41	0.14	6.57	14.5	2020	3.83	-25	39.70	17.95	Turbid, very light odor
9:44	0.14	6.59	14.6	1995	3.80	-25	37.20	18.35	Turbid, very light odor

Definition: TOC - Top of inner casing

Comments: Water level continued to drop despite efforts to reduce purge rate. Client advised to sample once all field parameters had stabilized.

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/21/2002
Weather: Sunny 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: GEI10G
Total Well Depth (ft.): 14.26
Screen Interval (ft.): 9.26-14.26

Pre-pumping water level from TOC (ft.): 0.40
Pump Depth (ft.): 11.70
Purge Method: Bladder pump

Purge Times(on/off): 11:10-11:58
Total Vol. Purged (L): 14.7
Sample Time: 11:59

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
11:13	0.15	6.23	16.3	1297	2.25	-71	156.00	0.44	Cloudy (orange), strong odor
11:16	0.31	6.36	16.0	1317	1.43	-71	133.00	0.45	Cloudy (orange), strong odor
11:19	0.31	6.52	16.0	1352	0.96	-82	68.90	0.46	Cloudy (orange), strong odor
11:22	0.31	6.65	15.9	1381	0.84	-82	56.30	0.46	Cloudy (orange), strong odor
11:25	0.31	6.70	16.0	1401	0.74	-87	39.90	0.46	Cloudy (orange), strong odor
11:28	0.31	6.75	16.1	1447	0.71	-90	36.40	0.46	Cloudy (orange), strong odor
11:31	0.31	6.81	16.2	1473	0.69	-93	26.70	0.46	Clearer, strong odor
11:34	0.31	6.82	16.2	1477	0.66	-93	22.30	0.46	Clear, strong odor
11:37	0.31	6.83	16.1	1477	0.62	-94	20.70	0.46	Clear, strong odor
11:40	0.31	6.83	16.1	1484	0.57	-95	19.90	0.46	Clear, strong odor
11:43	0.31	6.83	16.1	1487	0.52	-96	18.00	0.46	Clear, strong odor
11:46	0.31	6.83	16.1	1489	0.48	-96	16.70	0.46	Clear, strong odor
11:49	0.31	6.82	16.1	1490	0.45	-97	16.50	0.46	Clear, strong odor
11:52	0.31	6.82	16.1	1487	0.42	-98	15.50	0.46	Clear, strong odor
11:55	0.31	6.81	16.2	1484	0.40	-99	15.00	0.46	Clear, strong odor
11:58	0.31	6.81	16.1	1493	0.39	-99	15.30	0.46	Clear, strong odor

Definition: TOC - Top of inner casing

Comments Increased flow rate during first field reading due to minimal draw down. Blind duplicate sample DUP-02 collected at this well.

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/21/2002
Weather: Sunny 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: WE10R
Total Well Depth (ft.): 41.68
Screen Interval (ft.): 36.68-41.68

Pre-pumping water level from TOC (ft.): 11.80
Pump Depth (ft.): 39.20
Purge Method: Bladder Pump

Purge Times(on/off): 12:40-13:28
Total Vol. Purged (L): 8.3
Sample Time: 13:29

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp (° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
12:43	0.20	5.90	18.0	2790	2.73	-56	29.90	12.57	Clear, strong odor, redued purge rate
12:46	0.17	6.02	17.9	2760	2.69	-59	9.97	13.01	Clear, strong odor
12:49	0.17	6.22	17.6	2760	2.11	-64	6.67	13.17	Clear, strong odor
12:52	0.17	6.46	18.8	2780	1.80	-68	6.42	13.29	Clear, strong odor
12:55	0.17	6.52	17.4	2830	1.59	-71	5.16	13.30	Clear, strong odor
12:58	0.17	6.65	17.4	2920	1.40	-74	4.19	13.31	Clear, strong odor
13:01	0.17	6.70	17.6	2940	1.27	-74	3.43	13.34	Clear, strong odor
13:04	0.17	6.75	17.6	2970	1.11	-74	3.33	13.37	Clear, strong odor
13:07	0.17	6.78	17.6	2990	0.99	-74	3.23	13.40	Clear, strong odor
13:10	0.17	6.80	17.9	3003	0.87	-74	3.45	13.41	Clear, strong odor
13:13	0.17	6.81	18.5	3090	0.78	-75	3.39	13.40	Clear, strong odor
13:16	0.17	6.83	18.0	3040	0.70	-74	3.17	13.40	Clear, strong odor
13:19	0.17	6.84	18.1	3010	0.64	-74	3.22	13.40	Clear, strong odor
13:22	0.17	6.85	17.1	3000	0.50	-74	3.32	13.40	Clear, strong odor
13:25	0.17	6.85	17.3	2990	0.48	-73	3.31	13.40	Clear, strong odor
13:28	0.17	6.85	17.4	2990	0.47	-73	3.17	13.40	Clear, strong odor

Definition: TOC - Top of inner casing

Comments: Water level continued to drop despite efforts to reduce purge rate. Client advised to sample once all field parameters had stabilized.

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck & Lee, Inc.
Project: Kin-Buc Landfill

Date: 11/21/2002
Weather: Sunny 40-50°F

Analyst: R. Toogood

Monitoring Well I.D.: WE10S
Total Well Depth (ft.): 32.56
Screen Interval (ft.): 27.56-32.56

Pre-pumping water level from TOC (ft.): 12.56
Pump Depth (ft.): 30.00
Purge Method: Bladder pump

Purge Times(on/off): 14:07-14:46
Total Vol. Purged (L): 9.4
Sample Time: 14:47

Field Measurements / Readings During Purge

Time	*Purge Rate (L/min.)*	*pH (su)*	*Temp(° C)*	*Conductivity (umhos/cm)*	*Dissolved Oxygen (ppm)*	*Redox Potential (mV)*	*Turbidity (NTU)*	*Depth to Water from TOC (ft.)*	*Comments*
14:10	0.24	6.22	19.0	3070	3.83	-47	110.00	12.60	Cloudy, strong odor
14:13	0.24	6.33	18.1	3020	2.75	-45	114.00	12.61	Cloudy, strong odor
14:16	0.24	6.43	18.1	2980	2.65	-47	109.90	12.61	Cloudy, strong odor
14:19	0.24	6.53	18.1	2950	2.19	-52	66.40	12.61	Slightly cloudy, strong odor
14:22	0.24	6.59	18.1	2940	1.76	-54	70.40	12.61	Slightly cloudy, strong odor
14:25	0.24	6.61	17.6	2910	1.27	-55	35.00	12.61	Slightly cloudy, strong odor
14:28	0.24	6.62	17.6	2910	0.93	-56	22.40	12.61	Clearer, strong odor
14:31	0.24	6.63	17.4	2910	0.68	-57	14.40	12.61	Clear, strong odor
14:34	0.24	6.64	17.3	2900	0.54	-58	12.00	12.61	Clear, strong odor
14:37	0.24	6.65	17.2	2890	0.49	-59	10.92	12.61	Clear, strong odor
14:40	0.24	6.65	17.3	2900	0.46	-59	8.46	12.61	Clear, strong odor
14:43	0.24	6.65	17.8	2900	0.43	-61	8.01	12.61	Clear, strong odor
14:46	0.24	6.65	17.3	2900	0.45	-61	7.95	12.61	Clear, strong odor

Definition: TOC - Top of inner casing

Appendix A
Monitoring Well Purge and Sample Logs
Fourth Quarter / Annual Monitoring Report
Kin-Buc Landfill
Operable Units 1 and 2
Edison, New Jersey

Client: Blasland, Bouck, & Lee, Inc.
Project: Kin-Buc Landfill

Date: 12/5/2002
Weather: Snowy 20-30 °F

Analyst: R. Toogood

Monitoring Well I.D.: W10G
Total Well Depth (ft.): 22.16
Screen Interval (ft.): 12.16-22.16

Pre-pumping water level from TOC (ft.): 19.59
Pump Depth (ft.): 21.60
Purge Method: Peristaltic pump

Purge Times(on/off): 9:32-9:56
Total Vol. Purged (L): 2.1
Sample Time: 9:57

Field Measurements / Readings During Purge

Time	Purge Rate (L/min.)	pH (su)	Temp(° C)	Conductivity (umhos/cm)	Dissolved Oxygen (ppm)	Redox Potential (mV)	Turbidity (NTU)	Depth to Water from TOC (ft.)	Comments
9:35	0.08	3.10	11.2	594	4.55	405	4.10	19.88	Clear, no odor
9:38	0.08	3.08	11.1	588	4.98	406	3.65	19.95	Clear, no odor
9:41	0.08	3.29	11.7	572	6.15	405	3.15	20.11	Clear, no odor
9:44	0.08	3.44	10.3	561	6.62	402	2.44	20.25	Clear, no odor
9:47	0.08	3.52	10.1	549	6.79	402	1.86	20.39	Clear, no odor
9:50	0.08	3.60	9.9	546	6.96	398	2.03	20.44	Clear, no odor
9:53	0.08	3.63	9.9	548	6.95	399	2.10	20.56	Clear, no odor
9:56	0.08	3.64	10.0	547	6.81	398	2.00	20.69	Clear, no odor

Definition: TOC - Top of inner casing

Comments: Water level continued to drop despite efforts to reduce purge rate. Client advised to sample once all field parameters had stabilized.

ATTACHMENT A

LABORATORY ANALYTICAL DATA

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